

Amateur Radio

Volume 79
Number 8
August 2011
Price: \$7 incl GST
www.wia.org.au



Homebrew a HF mobile antenna
Test equipment essentials
Build an 80 m magnetic loop pt 2

**Wally VK6WG -
100 years young**



ISSN 0005-4859

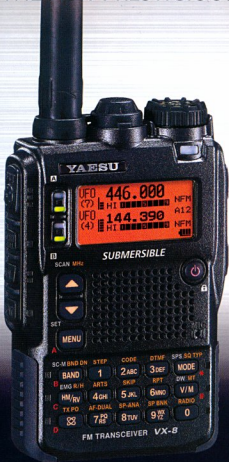
08





A TECHNOLOGY BREAKTHROUGH

THE NEW PRESTIGIOUS COMPACT RADIO WITH APRS



VX-8DR/E

VX-8GR/E

Vertex Standard (Australia) Pty Ltd

10 Wesley Court, Burwood East, Victoria 3151, Tel: **1800 356 254**

<http://www.vxstd.com.au>

NCRG Perth - 7 August
Tower Communications

Blue Mountains - 28 August
ATRC



Amateur Radio

The Journal of the Wireless Institute of Australia

Volume 79
Number 8
August 2011
ISSN 0002-8859

Editorial

Editor

Peter Freeman VK3PF
editor@wia.org.au

Technical Editor

Peter Gibson VK3AZL

Publications committee

Don Jackson VK3DBB
Evan Jarman VK3ANI
Bill Roper VK3BR
Ewen Templeton VK3OW
Ernie Walls VK3FM
Greg Williams VK3VT

All circulation matters

nationaloffice@wia.org.au

How to submit material

Secretary
AR Publications Committee
PO Box 2042
BAYSWATER VIC 3153
or armag@wia.org.au

Letters to Editor

Editor AR Magazine
PO Box 273
Churchill VIC 3842
or editor@wia.org.au

Hamads

'Hamads'
PO Box 2042
BAYSWATER VIC 3153
hamads@wia.org.au

Advertising

All enquiries to
Advertising Manager
AR Publications Committee
PO Box 2042
BAYSWATER VIC 3153
or admanager@wia.org.au

Registered Office

Unit 20 11-13 Havelock Road
BAYSWATER VIC 3153
Australia
Phone: 03 9729 0400
Fax: 03 9729 7325

Production Deadlines

All articles, columns, hamads and
advertising booking by **first day of
previous month.**

The contents of Amateur Radio are Copyright
Wireless Institute of Australia © 2011

General

Wally Green VK6WG	8
Wally Howse VK6KZ	
G'day Old Timer!	14
What's in a name - plenty or nothing?	
Ian Godsil VK3JS	
Parkes Radio Club and VK2BPK are back	18
Phil Derbyshire VK2FIL	
CCARC at Mersey Bluff Lighthouse	19
Keith Winkler VK7KW	
Six months on Willis Island	33
David Burton VK4DAV/ VK9WBM	
Gridsquare Standings at 17 June 2011	49
Guy Fletcher VK2KU	



This month's cover

This month our feature article is a report on Wally Green VK6WG, who is approaching his 100th birthday. The main photo shows Wally's antennas, and clearly reveals his interest in frequencies VHF and above. These dishes are permanently pointing East, in the direction of South Australia and Victoria, thousands of kilometres away. The inset photo shows Wally smiling alongside a recently constructed portable dish for 10 GHz. Both photos by Doug Friend VK4OE.

Technical

Foundation Corner 16 - Test equipment (for the F-call) in the 21st century: Home brewing revisited!	22
Geoff Emery VK4ZPP	
Home brewing a mobile HF antenna	24
John McLean VK2KC	
Building an 80 metre magnetic loop antenna for your attic - part 2	27
Jim Tregellas VK5JST	

Columns

AMSAT	37
Contests	44
DX - News & Views	10
Editorial	2, 5
Hamads	54
Silent Key	26, 51
Spotlight On SWLing	7
VHF/UHF - An Expanding World	40, 46
WIA Comment	3, 5
WIA News	4, 5
News from:	
VK2	20
VK3	3, 21
VK4	17, 52
VK5	6
VK6	16
VK7	15, 39

Contributions to Amateur Radio



Amateur Radio is a forum for
WIA members' amateur radio
experiences, opinions,
and news. Manuscripts
with drawings and/or photos are
welcome and will be considered
for publication. Articles attached to
email are especially welcome. The
WIA cannot be responsible for loss or damage to any material.
Information on house style is available from the Editor.

Back Issues

Back issues are available directly from the WIA National Office
(until stocks are exhausted), at \$8.00 each (including postage within
Australia) to members.

Photostat copies

If back issues are unavailable, photocopies of articles are available
to members at \$2.50 each (plus an additional \$2 for each additional
issue in which the article appears).

Disclaimer

The opinions expressed in this publication do not necessarily reflect
the official view of the WIA and the WIA cannot be held responsible
for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's oldest

National Radio Society, founded 1910.

Representing

The Australian Amateur Radio Service

Member of the

International Amateur Radio Union

Registered Office of the WIA

Unit 20, 11-13 Havelock Road

Bayswater, Victoria, 3153

Tel: (03) 9729 0400 Fax (03) 9729 7325

email: nationaloffice@wia.org.au

<http://www.wia.org.au>

All mail to

PO Box 2042 BAYSWATER VIC 3153

Business hours: 10am – 4pm weekdays

National Office staff

Manager	Mal Brooks	VK3FDSL
Administration Officer	Margaret Williams	
Examination Officer	Dianne Ashton	VK3FDLZ

Board of Directors

President	Michael Owen	VK3KI
Vice-President	Phil Wait	VK2ASD
Secretary	Sarah Thompson	VK3AUD
Treasurer	John Longayroux	VK3PZ
Members	Philip Adams	VK3JN
	Bob Bristow	VK6POP
	Ewan McLeod	VK4ERM
	Chris Platt	VK5CP

Coordinators

AMSAT	Paul Paradigm	VK2TXT
ARDF	Jack Bramham	VK3WVW
Australian ARISS	Tony Hutchison	VK5ZAI
Awards	Keith Bainbridge	VK6RK
Clubs	Ted Thrift	VK2ARA
Contests	Craig Edwards	VK8PDX
John Moyle Field Day	Denis Johnstone	VK4AE
Editor 'AR'	Peter Freeman	VK3PF
EMC/EMR	Gilbert Hughes	VK1GH
	Keith Malcolm	VK1ZKM
	Gilbert Hughes	VK1GH
	David Wardlaw	VK3ADW
	John Bishop	VK2ZOI
	John Martin	VK3KM
Historian	Peter Wolfenden	VK3RV
IARU Region 3 Liaison	Chris Platt	VK5CP
Monitoring Service	Peter Young	VK3MV
International Travel Host	John Miller	VK3DJM

ITU Conference & Study Group

	David Wardlaw	VK3ADW
	Keith Malcolm	VK1ZKM
	Brett Dawson	VK2CBD
	Dale Hughes	VK1DSH
	National Office	
QSL Curator	Peter Mill	VK3ZPP
Repeater	Robert Broomhead	VK3DN

Emergency Communications Group

Coordinator	Phil Wait	VK2ASD
Members	Ewan McLeod	VK4ERM
	Peter Young	VK3MV

Editorial

Peter Freeman VK3PF

Milestones

August sees two amateurs reach a very significant milestone – their 100th birthday.

We feature one of these amateurs on the cover – Wally Green VK6WG. As you will see from the accompanying story, Wally has been an active amateur for a long time, and has held significant distance records on VHF, UHF and microwave bands. Many of these records stood for a very long time and were made with homemade equipment. Wally is still a very sought after contact, with many stations in the eastern half of the continent looking to the west when it looks like conditions may exist for tropospheric ducting across the Great Australian Bight.

I am also aware that Pierce Healy VK2APQ also "hits the ton" in the middle of August. I am aware that Peter Wolfenden VK3RV recently paid Pierce a visit for an interview, so I am sure that we will be able to publish a story about Pierce in an upcoming issue of *AR*. Pierce has been very prominent in amateur radio matters in VK2 over the years.

Congratulations go to both of these prominent amateurs on reaching this significant milestone.

A busy weekend

I have just returned from a local venue where around 70 amateurs gathered for a social meal prior to GippsTech 2011. The last week or so has been busy in finalising preparations for the event, for all the members of the Eastern Zone ARC committee.

We are expecting just over 100 amateurs to attend the conference this year. We have a packed program of technical presentations, but with hopefully enough breaks to facilitate the informal discussions that are an integral part of a gathering of like-minded individuals. In addition to the technical program, a number of amateurs are accompanied by their partners, who will participate in their own program.

The weather in Gippsland is looking to be bleak for the weekend

– we have a series of cold fronts coming through, with strong winds coming from the far south. These conditions may impact the partners' tour, but should not be a problem for the amateurs at the technical program – I trust that the heating system will be working correctly for the weekend!

Hopefully one of the attendees may prepare a report on the weekend's activities so that interested readers can share the experience from a distance.

During the weekend, it will be my pleasure to present our regular columnist David Smith VK3HZ with the AJ Shaws Smith Award for Journalism, announced at the AGM in Darwin. David writes the VHF/UHF – *An Expanding World* column, focussing on weak signal communications, with support from Brian VK5BC for 6 m activity and Rex VK7MO on matters digital.

New arrangements for contributions to AR

At its last meeting, the Publications Committee (PubCom) decided that all articles, columns and Club news items should be submitted through a single gateway – via the PubCom Secretary. The Secretary is Ernie Walls VK3FM, who can be reached through the email address armag@wia.org.au

All advertising should be submitted through the Advertising Manager using the address admanager@wia.org.au

Electronic submissions are preferred for all contributions, as it reduces the workload on our team of volunteers. If in doubt, look at the guidelines for contribution to the magazine, available on the WIA website at <http://www.wia.org.au/members/armag/contributing/>

Everyone is reminded that all material for an issue of *AR* must be submitted by the first day of the month prior to the cover date of the magazine when the item should appear.

Continued on page 5



WIA comment

Michael Owen VK3KI

The IARU

Recently we have stressed the importance of the ITU, the International Telecommunication Union, the United Nations agency responsible, among other things, for the coordination of the radio spectrum. Most countries are Member States of the ITU, which exists by way of a treaty between the countries, and by which they generally agree to be bound by ITU decisions in respect of the use of the radio spectrum.

The ITU is divided into 3 sectors, Radiocommunication (ITU-R) which is the most important sector for us, Development (ITU-D) and Standardisation (ITU-T).

The amateur services exist by virtue of the treaty between nations that is the ITU's Radio Regulations. It is the "amateur services" because the Radio Regulations defines both the "amateur service" and the "amateur-satellite service". The Radio Regulations set out the basic regulations that govern the amateur services, as well as the frequency bands the amateur services can use, though it is up to each country to apply those treaty provisions through their national laws.

The Radio Regulations are reviewed and revised by the ITU's World Radiocommunication Conferences (WRC) held every four or five years, in accordance with agendas set by previous WRCs.

Because the Radio Regulations is a treaty between countries, it is the 192 ITU Member States, the countries that are the members of the ITU, which participate in a WRC.

The process leading to a WRC is lengthy, and a little convoluted.

And, if a position is lost during that process, it is probably true to say it is not going to be recovered.

Each agenda item for a WRC is studied by one or more ITU-R Study Groups or Working Parties, ultimately leading to the formulation of the technical options that could meet the particular agenda item.

But at the same time, the Regional Telecommunication Organisations, the RTOs, such as the Asia Pacific Telecommunity, prepare through their own series of meetings of countries to adopt positions for the next WRC that are common for the countries in region.

How, in this long running and complex process, do the radio amateurs protect their interests?

The answer is, in fact, in two ways.

Critical to the representation of the amateur interest is the International Amateur Radio Union, the IARU. The IARU was formed in 1925 and its members are the national amateur radio societies in each country. It is a federation of national radio societies, with an International Secretariat provided by the US national amateur radio society, the ARRL.

The IARU is a recognised international telecommunication organisation, and as such is Sector Member of the ITU-R, and also the ITU-D.

As a Sector Member, the IARU participates in the various ITU-R and ITU-D meetings that affect directly, or could indirectly affect the amateur services. The IARU participates in ITU-D meetings because that is where emergency communications are addressed and ITU-R meetings because they directly lead to a WRC, including the ITU-R Study Groups and Working Parties that deal with agenda items for a WRC that directly or indirectly affect the amateur services.

The IARU includes the three IARU Regional organisations of IARU

member societies in each of the three ITU defined Regions.

The three IARU Regional organisations represent the amateur services to the RTOs in their region, and also provide two members each of the IARU's Administrative Council, which meets annually and which formulates broad IARU policy.

Because it is not a "country", the IARU is an observer at a WRC, where its role is to inform and, to an extent, coordinate.

It is through the regional IARU organisations that the national radio societies participate directly in the IARU, in our case through the IARU Region 3. The WIA contributes to IARU by paying a subscription, currently 65 Yen (around 75 Australian cents) for each "transmitting member". In addition, the WIA participates in the IARU Region 3 Conferences held every three years, which is the opportunity to contribute directly to IARU policy, involving the costs of its representatives.

The other way that amateurs protect their interests is directly through their own national amateur radio society.

Many countries, including Australia, accept the national amateur radio society as a participant in the national preparation process for a WRC or at least take into account the representations of their national amateur radio society in formulating their position for a WRC.

Some countries, including Australia, accept the nomination of their national amateur radio society of an appropriately qualified amateur as member of the national delegation to the RTO's meetings, the ITU preparatory meetings and a WRC.

Continued on page 5

Change in callsign recommendation procedure

From 8 July 2011 a change has been made to the procedures for a Callsign Recommendation for a two letter callsign in Queensland, New South Wales and Victoria.

Since 1 December 2010 the procedure in respect of two letter callsigns in those states has been that no callsign recommendation can be made until seven days after a callsign is placed on the Public List, (the list of available callsigns on the WIA website) to allow someone who has inadvertently allowed a licence to lapse to claim back the callsign.

Applications for a two letter callsign were still required to be lodged by mail, but after the seven days had elapsed, if there was more than one application for a callsign and the callsign has not been claimed back, then the applications were drawn at random in the presence of a WIA Director, Secretary or Treasurer. This ensured that those living in more remote areas, without Express Post, were not disadvantaged.

Now applications for a two letter callsign in Queensland, New South Wales and Victoria may be sent by mail, facsimile, scanned and sent by email, or delivered by hand to the WIA office.

After the expiration of seven days, the ballot procedure will determine the applicant who will receive the Callsign Recommendation.

In addition, fees paid by unsuccessful applicants will be retained until the callsign has been allocated by ACMA, and if the callsign is not allocated, then the next applicant drawn would be offered the callsign and the fees will only be refunded to unsuccessful applicants after the ACMA has allocated the callsign.

The WIA cannot accept a standing application for a two letter callsign, as the application for a

Callsign Recommendation must always relate to a particular callsign.

Renewing amateur licenses – a reminder

Recently an amateur forgot to renew his licence because he failed to advise the ACMA of his new address, and was upset when his two letter callsign was allocated to someone else.

The "Comment" in the June 2009 issue of *Amateur Radio* addressed this problem in some detail, and further information can be found on the WIA website www.wia.org.au under the tab "Australian amateur licensing and callsigns" under the button "Get your Amateur Radio Licence".

The Radiocommunications Act does not impose on ACMA an obligation to issue a renewal notice. ACMA does so, but failure to receive a renewal notice is no excuse for not renewing a licence.

Obviously, failing to notify the ACMA of a change of address will mean that even if the ACMA does send a renewal notice, it will go the wrong address.

But the Act does provide that a licence can be renewed from 6 months before and 60 days after its expiry date. It is the licensee's responsibility to ensure that the licence is renewed in that time.

A callsign is only a condition of a licence, and if the licence is not renewed, after 60 days from the expiry date the callsign will be placed on the Public List, (the list of available callsigns on the WIA website) and after seven days the WIA will issue a Callsign Recommendation to whoever wants that callsign.

Ham radio far from over or out

That is the headline of a lengthy well-researched article by Katie Cincotta in *The Age* newspaper published on 8 July 2011, which features many aspects of amateur radio.

It begins with a picture of Justin

Stewart VK3FLIP and Monique Golub VK3FWPZ as the youngsters take to the airwaves at Sherbrooke Community School and is peppered with personal accounts of activity. Maths teacher Edward Seeto VK3LIP of the Sherbrooke Community School, which has its own radio club VK3KID, demonstrates on a hand-held radio, typing in a code on a keypad and accessing a web-enabled local repeater to connect to a user in Dallas, Texas.

Another relative newcomer is Richard Holmes VK3TXD, keen to dispel the amateur radio stereotype of old blokes tinkering in beeping sheds. He hopes a new generation will find clever ways to evolve the hobby and embrace its global connections. One of the main things that got him into the hobby was the lure of long-distance or DX contacts.

The article touches on the serious side of things. Amateur radio proved itself to be relevant and invaluable during recent natural disasters in Australia, Japan, China, Pakistan and Haiti. It quotes veteran Doug McArthur VK3UM on his Black Saturday bushfires experiences, and even before that, the aftermath of Tropical Cyclone Tracy in 1974. Of course his moon-bounce and beyond exploits from the giant dish on his country property are featured.

Eastern and Mountain District Radio Club president Jack Bramham VK3WWW regards amateur radio as the original social network. The other pursuit of Jack is ARDF (Amateur Radio Direction Finding), an electronic version of orienteering that's also called radiosport or fox-hunting.

Wireless Institute of Australia spokesman Jim Linton VK3PC says one of the biggest things to happen to amateur radio is the removal of Morse code as a minimum requirement for an operator to obtain a licence. The Foundation licence is now simple enough for young children to acquire, although many

progress to the higher grades as Standard and Advanced which give them more privileges.

The two-page article featured in the newspaper's well-read Green

Guide and promoted on page 2 in the main editorial section, notes 20,000 Australians have amateur radio licences, with increasing interest being shown by younger

people and women. The article which involves wide research giving coverage to amateur radio, concludes with some useful links to get more information.



Editorial

Continued from page 2

For example, for an item to appear in the September issue of AR, the material should be with us by August 1. Regular contributors have a more detailed schedule which does ask for regular contributions to occasionally be submitted a few days earlier. But the absolute deadline, if we are to maintain adherence to our

production schedule, must be the first of the month prior to publication.

These details are included in the left-hand column on page 1 of each issue of AR, with the details updated commencing with this issue.

Editor changes email

Effective immediately, I can be

reached through a new email address: editor@wia.org.au

The old address will continue to operate for a period, but please change your address book to the new address as soon as possible.

Cheers,

Peter VK3PF



WIA comment

Continued from page 3

Only some countries take this position, and only some national radio societies can afford to meet the quite high costs involved, because it is the society and not the government that meets the costs involved.

It is obvious that the national amateur radio societies cannot each put a position that is different from each other society. To succeed, in this whole long and complex process, national societies must put common positions, and it is through the IARU that common positions can be developed, and through the IARU

that these positions can be put to the Study Groups and Working Parties and to the different RTOs.

The WIA nominates its representatives for the Australian national preparatory processes and on Australian national delegations and meets its representative's travel and accommodation expenses.

That expense would not be justified if our representatives were working in a vacuum, without having a basic position consistent with the position being put by the amateurs in other countries.

Its Constitution defines the primary role of the WIA as being "to promote, advance and represent in any way it thinks fit Amateur Radio and the interests of Radio Amateurs". The WIA could not effectively do that in the forum that ultimately matters most, a WRC, without the IARU, as collectively we can best protect our existing spectrum access and develop common position on new spectrum allocations.



Major Australian contests/activities for August

13/14 Remembrance Day Contest

See <http://www.wia.org.au/members/contests/rdcontest/>

20/21 International Lighthouse/Lightship Weekend

See <http://illw.net/>

27/28 ALARA Contest

See <http://www.alara.org.au/>

VK5news Adelaide Hills Amateur Radio Society

Christine Taylor VK5CTY



AHARS members hard at work on the Guide Hall refurbishment.

This month we had a very interesting and topical talk about the installation of solar panels on our roofs. It was the solar electric panels in particular that Peter VK5TZX spoke about. He is involved in installing these panels.

It was very informative to know how the placement of the panels is planned and the good and bad ways to do this. It appears that it is necessary to have an air space between the roof and the panels.

The quality of panels can vary considerably, so the charts Peter showed us were very informative, as was his discussion about the placement of the panels on the roof. His form plots the roof lines out before they decide on the best site.

A number of our members have already had these panels installed and some of them are selling power to the grid. They have also found themselves changing the way they

use electricity in their houses when it means the difference between using and paying for electricity or having some to spare to sell back to the grid. With the end of the government subsidy in the near future this was a very up-to-date topic. There could well have been a number of people who heard the presentation and then decided to take the plunge now rather than later!

The other main activity of AHARS at the moment is the refurbishment of the Guide Hall they plan to use for various club activities. Most Saturdays there are 10 to 12 people helping and the enthusiasm seems to be continuing. At the time of writing the Gyprock has been finished and painting started the following weekend. We hope to use the shed for training courses, projects and a club station.

July 3 was the club mid-year lunch, and was held at the Fresh Choice restaurant. Over 40 people attended.

The annual Hamfest will be held on Sunday November 20 at the Goodwood Community

Centre. Contact the committee to book a table.

Our regular meetings are held on the third Thursday of each month in the Blackwood Community Hall, when 60 or more people usually gather. Visitors are always welcome so if you are in Adelaide on any third Thursday, please come to the hall and join us. The meetings start at 7.30 and the subject of the talks is advertised on the Sunday morning broadcasts. The club website is www.ahars.com.au



Spotlight on SWLing

Robin L. Harwood VK7RH

Well, there have been significant developments on shortwave over the past few days. Radio Netherlands is poised to stop airing broadcasts for the Dutch diaspora and alter their focus to airing "Free speech" broadcasts. Their operating budget has been slashed by 70%. The Bonaire relay station in the former Netherlands Antilles was already earmarked for closure and the Madagascar relay will be probably put up for sale. RNW has been utilising transmitters in Germany and Saipan and I expect that this also will be ending. The RNW staff are mounting a last ditch campaign just as I write this, outside the Dutch legislature. The present government is a coalition and there would be few votes in saving the organisation: it has not been a big issue domestically.

Deutsche Welle also has made significant cuts to their output and plan to exit shortwave for the Internet. Programs will continue only for central and eastern Africa, from Kigali. As reported recently, the Sri Lankan station in Tricomalee will be closed. Even MW and FM relays within Russia and the other CIS nations have ceased.

However the BBC World Service was thrown a lifeline. The Foreign Office granted additional funds for the Arabic, Hindi and Somali programming to continue on shortwave. The recent "peoples"

revolts in North Africa and Syria have highlighted the need for Arabic programs to continue. Hindi is different because, although the internet is gaining in the Indian sub-continent, penetration is still extremely low.

I have been reporting that Family Radio went to continuously broadcasting music and very rarely broadcasting speech, after Harold Camping's failed prediction of the End of the World.

The network has been cancelling shortwave relays and has been confined to broadcasting between the hours of 2200 to 0500, which is a comedown from their 24/7 output. Also Camping suffered a stroke and has been in a hospital, partially paralysed and with slurred speech. He is 89 and I do not think he will resume broadcasting. I received an email stating that Family Radio has stopped broadcasting to North America and may cease altogether by the end of June.

Also keep an ear on Greece. There has been considerable unrest due to the Global Financial Crisis and an EU bailout, requiring the Government to introduce harsh austerity measures. There have been frequent strikes at the broadcaster and program outages. Perhaps the shortwave service may close, although if Greece defaults the broadcaster could well continue.

You have probably heard about this present sunspot cycle not peaking, as predicted, in 2012. Experts are theorising that we may have entered a period very similar to the middle of the 18th century when there were very few sunspots for 50 to 60 years. This period is known as the Maunder Minimum. Coincidentally the recent proposal of the operators of WWV and WWVH, in Colorado and Hawaii, to delete the hourly sunspot numbers and predictions in September has, fortunately, been rescinded. They are heard at 18 minutes past the hour.

It is midwinter here and the usual phenomenon of signals coming across Antarctica at the local midday has not eventuated. I expect it has little to do with propagation as European broadcasters, primarily DW and the BBC, have gone from 49 metres. The only broadcaster I was getting on 41 metres was two outlets of Radio Rossi on 7270 and 7285. The latter frequency was a few seconds behind the other. I was getting a weak carrier and modulation on 7056 and straining to identify it when I heard an unmistakable commercial for a local bottle shop. Argh, the 7th harmonic of 1008, a five kilowatt sender barely 1.5 kilometres from here!

Well that is all for August. Until next time, good monitoring.



Plan NOW for the 54th JOTA 2011

The **54th Jamboree On The Air** will take place on **15 and 16 October 2011**.

This year's theme is: ***Peace, Environment and Natural Disasters.***

An exciting activity that focuses on the strength of Scouting: to act and support in unforeseen circumstances. Scouts are prepared.

Radio amateurs and clubs also need to be prepared - your planning should by now be well underway. Contact your local Scout or Guide group to confirm their plans.

Wally Green VK6WG

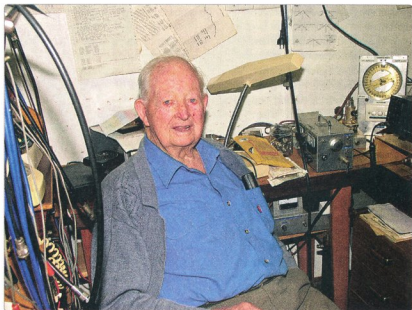
Wally Howse VK6KZ

This is a tribute to Wally Green VK6WG as he approaches his 100th birthday on 11 August, 2011. He is a man to be admired for his openness and willingness to help others and for his achievements in life and in amateur radio. A real gentleman!

He placed Albany on the world map of amateur radio. Not only are his amateur radio achievements widely recognised in Australia but also in the United States and in Europe. He was welcomed by Charlie Suckling G3WDG, another of the world's leading amateur radio microwave proponents, when visiting the United Kingdom and by the many enthusiasts at the 1996 Microwave Update conference in the United States. People were amazed that a man of his age, self-taught and living in such an isolated (from VHF/UHF and microwave enthusiasts) town such as Albany could build and operate equipment that he used to create history.

He was one of the Australian pioneers of the microwave bands along with his close friend the late Reg Galle VK5QR, of similar age to him and living nearly 2000 km away in Adelaide. The pair did not accept the general theory that signals at frequencies of 144 MHz and upwards could not be heard much beyond line-of-sight distances.

Radio contacts between the two on these bands showed that the theory was wrong and that once they had built the necessary transmitters, receivers and antennas then, with patience and observation of weather conditions, it was possible for them to communicate between Albany and Adelaide, not only on 144 MHz but also 432, 1296, 2304 and 3456 MHz. Contacts Wally made on the last four frequencies were world record distances. Although the distances have since been exceeded elsewhere in the world, Wally retains the Australian records for 1296 and 3456 MHz.



Wally VK6WG in his shack.

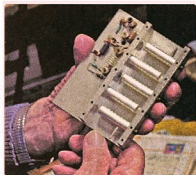
Building the transmitters and receivers and ensuring that they were on the correct frequencies was an achievement in itself in the 1970s. Very few commercial operators had seen the value of these bands and developed specialised components for them. Test equipment was almost non-existent. Wally used ingenuity to adapt or obtain rare components and skill to construct the high precision metal parts needed for these frequencies.

He developed his own silver-plating equipment to reduce the signal losses resulting from using copper or brass alone. His skill and reputation led some amateurs in the United States to ask him to make some microwave equipment for them – which he did.

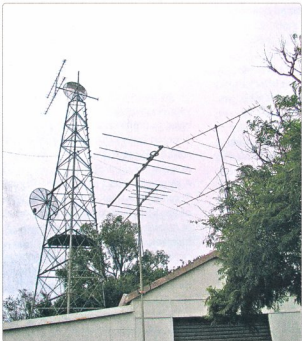
Long before parabolic dishes (antennas) were readily available for satellite and Pay TV, he built his own, painstakingly bending straight pieces of metal into the necessary parabolic shape, holding them at the centre and at the circumference and filling the gaps with wire mesh to

provide the antennas necessary for microwaves.

On the local scene in Western Australia, Wally's enthusiasm to explore these higher frequencies over the 400 km path between Albany and Perth provided an incentive for radio amateurs in Perth to improve their equipment and skills. From the mid-1950s, despite the outside, un-insulated shack in the Albany weather, Wally was there at 0645 almost every morning to carry out checks with Perth, initially



A 23 cm receive converter, entirely built and silver plated by Wally VK6WG.



A view of the VK6WG antenna farm in Albany.

with Rolo Everingham VK6BO, until Rolo's death in 1976. Prior to, and after Rolo's death, others joined in such as the late Cec Andrews VK6AO, Don Graham VK6HK, Percy Beacher VK6DD and myself. This continued into his late 90s. This contribution of over 50 years to Perth amateurs is unlikely to be ever matched by others.

Wally provides a further inspiration in showing that age is not a barrier to adapting to advancing technologies.

I express my utmost appreciation for his pioneering efforts and gratitude for the many discussions with him and the help he has given me and many others in their amateur radio activities.

We trust he remains in good health and continues in amateur radio for many more years.

All photos by Bob Elms VK6BE.



Wally VK6WG with an old Leydon Jar.



Wally's original Amateur Operator's Certificate of Proficiency, issued 3 June 1936.



Another view of the VK6WG antenna farm.

DX-News & Views

John Bazley VK4OQ
john.bazley@bigpond.com

Well conditions certainly have not been very good of late, but if you are prepared to "scrape the barrel" then there are still a few "nuggets" to find. At the time of writing News & Views, the SFI is 87. Looking back a year ago the maximum predicted for the end of June was 82! In the meantime we have seen some real improvements; the trouble is that they do not seem to last very long!

But...

The American Astronomical Society meeting in Austin, Texas has just made a major announcement on the state of the sun. Sunspots may be on the way out and an extended solar minimum may be on the horizon.

"Some unusual solar readings, including fading sunspots and weakening magnetic activity near the poles, could be indications that our sun is preparing to be less active in the coming years. The results of three separate studies seem to show that even as the current sunspot cycle swells toward the solar maximum, the sun could be heading into a more-dormant period, with activity during the next 11 year sunspot cycle greatly reduced or even eliminated. The results of the new studies were announced on 14 June at the annual meeting of the solar physics division of the American Astronomical Society, which was held at The New Mexico State University in Las Cruces.

Currently, the sun is in the midst of the period designated as Cycle 24 and is ramping up toward the cycle's period of maximum activity. However, the recent findings indicate that the activity in the next 11 year solar cycle, Cycle 25, could be greatly reduced. In fact, some scientists are questioning whether this drop in activity could lead to a second Maunder Minimum, which was a 70-year period from 1645 to 1715 when the sun showed virtually no sunspots.

We expected to see the start of the zonal flow for Cycle 25 by now, but we see no sign of it. This indicates that the start of Cycle 25 may be delayed to 2021 or 2022, or may not happen at all.

If the models prove accurate and the trends continue, the implications could be far-reaching. If we are right, this could be the last solar maximum we'll see for a few decades. That would affect everything from space exploration to the Earth's climate."

So back to 2011!

Mike KF6RCP is currently vacationing for the next few months from the United Kingdom Sovereign Base Areas on **Cyprus** and plans to operate as ZC4MIS. He will be using an FT-817ND into a LDG Z817 antenna tuner and Buddistick, mostly from the beach. Listen for him primarily on 20 metres on SSB, PSK31 and JT65. He is open to skeds and you can email him as his email address is listed on his QRZ.COM page. QSL via KF6RCP, LoTW or eQSL.

ZD8D – Ascension Island. Gerd DJ4KW, Werner DJ9KH, Wolf DK1IP, Arno DL1CW and Rainer DL7OR will be active from 24 July to 9 August, including the IOTA contest. They are planning to operate 160-6 with two stations, mostly digital & CW with some SSB. QSL via DL9HO. Also, see the web: <http://www.zd8d.de>

ON6ZK has announced he will be in **Turkey** and QRV as TA4/ON6ZK from 22 to 30 August. Activity will be holiday style on CW, mostly on 14.060 MHz. QSL via ON6ZK.

It is good to hear news from the DXCC desk that QSL cards for the current VK0KEV activity from **Macquarie Island** are now accepted for DXCC credit. The same applies to the QSL cards for TJ9PF, **Cameroon**, 2011. Due to a software bug, the QSL labels for TJ9PF show the year 2001 instead of 2011. The DXCC Desk has been informed and will accept these QSLs. The TJ9PF logs are now loaded onto LOTW.

As a reminder, in January of last year Russia went through some callsign prefix changes. The changes affected both **European Russia** and **Asiatic Russia**. Details can be found at www.qrz.com/db/rw2l

A more simplified explanation Roman Thomas R5AA (ex RZ3AA) President of the SRR, has recently been posted at <http://www.ar1.org/news/new-russian-prefix-system-in-use>

Jean-Francois F4FUC is heading to **Djibouti** in July where he plans to be staying until the summer of 2013. He plans to be QRV as J28UC using a TS-480 running 100 watts into a vertical for activity on 10, 15 and 20 metres. He will also have a dipole for 40, 20 and 10 metres. QSL via F4FUC.

In September Frosty K5LBU will be traveling to **South Africa** and **Botswana** with planned activity in the latter for about a week to 10 days. If anyone is interested in tagging along you can contact him. Plans are to set up antennas at a new lodge (www.lotsane.com). The current plan would be to "be there or going there" around 17 September. His email is listed on QRZ.COM - <http://www.qrz.com/db/k5lbu>

Steve W6EOD reports there has been a change to his Afghani callsign. Originally he was issued T6EOD, however GIROA (the Government of the Islamic Republic of Afghanistan) has changed his call to T6SH. As a reminder Steve is in the Garmsir District of Helmand Province, **Afghanistan** until November. No details yet of his QSL plans.

Ronald WA8LOW plans for the upcoming August DXpedition to **American Samoa**. "All the equipment has arrived on Tutuila, American Samoa and is in storage" he says. There will be five team members and four stations QRV from two different locations on the island. "The North location near Vatia will be on 160 - 10 metres with two kW

stations using three element beams on 40 - 10 and large verticals on 160 - 80. This site will be set up for all modes. The South location near Fogagago will be on 20 - 6 SSB only with two kW stations using tribanders and a three element six metre beam. Two operators will be arriving on the island on 28 July and the remainder on 1 August. They may try to get one station on line for the IOTA contest. The dates for this DXpedition will be from 1 to 17 August.

The Five Star DXers Association are organising a major DXpedition to **Kiritimati** (Christmas Island, T32, OC-024), Eastern Kiribati in September-October 2011. A very large group of experienced operators from 13 different DXCC entities will be active as T32C (requested callsign) on all bands and modes, with up to 16 stations on the air, using amplifiers along with

monoband beams and vertical dipole arrays, 24 hours a day, for almost four weeks, including four weekends. The primary objective is to give as many DXers as possible a first contact with this rare DXCC entity and, as a secondary objective, to give as many band-slots as possible. At this time the organizers are seeking contributions from sponsors to help defray the very significant logistics costs of this DXpedition. Details on how to donate and further information can be found at www.t32c.com

A large multi-national team will be active from **Rotuma Island** OC-060 in late September, early October. Hrane Milosevic YT1AD recently visited Fiji and says "We have obtained the licence of 3D2R and a landing permit. We have received the Rotuma Island Council's official approval as well as from the Prime Minister's Office. The team of

19 operators will meet in Fiji on 24 September and sail to Rotuma with an arrival slated for the 27th. We will be active on all bands and modes from 27 September to 7 October. We will focus on the low bands at this time of the year and will make every effort to satisfy the needs of EU operators".

At this time, they are seeking foundation, club and individual sponsors to help defray the costs of carrying out this DXpedition. QSL via YT1AD. The website for the expedition is at <http://www.yt1ad.info/3d2r/index.html>

Special thanks to the authors of *The Daily DX* (W3UR), *425 DX News* (1JQJ) and *QRZ.DX* for information appearing in this month's DX News & Views. For interested readers you can obtain from W3UR a free two-week trial of *The Daily DX* from www.dailydx.com/trial.htm



New High Power Amplifier Modules for 1.3 GHz!



The brand new power amplifiers MKU PA 131000 CU and MKU PA 13250 CU provide excellent efficiency together with brilliant linearity and are ideally suited for huge EME- and contest-operations. The used LDMOS technology represents the current state of the art and allows the development of compact amplifier modules with high output power.

Applications

- Analog and digital operation modes e. g. SSB, CW, WSJT, (D)ATV
- High-Power EME-operations

Features

- High linearity
- High efficiency (up to 50 %)
- 50 V LDMOS technology
- Built-in sequence controller and overheat protection (only MKU PA 131000 CU)
- Milled copper case for optimum heat transfer

Type

Frequency range
Input power
Output power
Efficiency
Supply voltage
Current consumption
Input connector / impedance
Output connector / impedance
Case

MKU PA 13250 CU

1270 ... 1300 MHz
4 ... 6 W
250 W
typ. 50 %
+ 50 V
max. 12 A
SMA-female, 50 ohms
N-female, 50 ohms
milled copper, silver-plated

MKU PA 131000 CU

1280 ... 1300 MHz
20 W ... 30 W
1000 W
typ. 50 %
+ 50 V
max. 40 A
SMA-female, 50 ohms
7/16-female, 50 ohms
milled copper, silver-/nickel-plated

KUHNE electronic
MICROWAVE COMPONENTS

For further information please visit our website www.db6nt.com

VK3news Amateur Radio Victoria

Jim Linton VK3PC

www.amateurradio.com.au

arv@amateurradio.com.au

Council for 2011-12 announced

The first Council meeting held since the Annual General Meeting determined the office-bearers and other portfolios. The President is Barry Robinson VK3PV and the Vice-President is Peter Mill VK3APO. The Secretary is Keith Proctor VK3FT and retaining the Treasurer position is Ross Pittard VK3CE.

Appointed is Tony Hambling VK3VTH as Award Manager. The posts of Event Coordinator Terry Murphy VK3UP, Education Team Leader Barry Robinson VK3PV and Repeaters to Peter Mill VK3APO remain unchanged.

Also on the eight-member committee is Peter Cossins VK3BFG, who is our Videographer and

DATV person, and Immediate Past President Jim Linton VK3PC, who also is attending to the Centenary celebration of Amateur Radio Victoria. Outside the Council sits the On-line Project Coordinator Gary Furr VK3FX, and volunteers for the Office and QSL Bureau.

Centenary details advised

This year is the 100th for the state-wide organisation, which began in 1911 as the Amateur Wireless Society of Victoria, quickly changing its name to the Wireless Institute of Victoria and ultimately, with nationalisation, began trading as Amateur Radio Victoria.

To mark the occasion a celebratory period from 1 August through to 30 November was chosen. Parts of the celebration,

involving the world's first international DATV QSO Party, and a weekend in the National Parks are outlined below. It was decided by the membership that a special callsign be obtained for use on a rostered basis throughout November.

The centre of the celebration will be a Centenary Award, with rules to be posted under the Award section of our website.

Basically a total of 100 points is required to qualify. Contact with each member is worth two points, and 10 bonus points is available by contacting either VK3WI or the yet to be obtained special callsign. The limitation is that only one contact per band per UTC day is allowed.

The callsign VK3WI will be on air at least during the Remembrance Day Contest on 13/14 August,



WINTERFEST 2011

<http://bluemountainwinterfest.org/>

The Blue Mountains Amateur Radio Club invites you to Winterfest 2011, on Sunday August 28 at Mount Riverview Public School 2774. There will be commercial vendors, a flea market, displays, prizes and a sausage sizzle. If you would like to run a stall or a display, check <http://bluemountainwinterfest.org/> or email winterfest2011@bmarc.org

BMARC would like to thank the following companies for their support

TET-EMTRON

<http://www.tet-emtron.com/>

ACTION COMMUNICATIONS

<http://www.actioncomms.com.au/>

AMATEUR TRANSCEIVER RADIO CENTRE

<http://www.atrc.com.au/>

Battery World™

Power for anything...anytime!

<http://www.batteryworld.com.au/>

Automation Electrical Controls

Importers & Distributors of Quality Electrical Control Components

<http://www.aeelectrical.com.au/>

NBS Antennas & Masts

<http://www.nbsantennas.com.au/>

YAESU

<http://www.vxstd.com.au/>

the International Lighthouse and Lightship Weekend on 20/21 August, and the Oceania DX Phone Contest on 1/2 October.

Club stations signing VK3WI will be heard during the two contests and also during the ILLW from the Timeball Tower at Point Gellibrand, Williamstown.

Stations that operate from National Parks under the Keith Roget Memorial National Parks Award conditions on the third weekend of November will qualify for ten bonus points per each valid contact, thus adding incentive for them to support the day.

A world first for Amateur TV

The first Digital Amateur Television QSO Party, expected as early as this month, involves primarily Amateur Radio Victoria's VK3RTV DATV repeater that services Melbourne and Geelong.

As part of the Centenary activity, Peter Cossins VK3BFG has a bold plan to link VK3RTV via California and the internet using the excellent BATC website that would have the

advantage of a wider audience and the ability to have two repeaters on line at the one time.

The transmission is also planned to be aired via the VK3RBO television repeater in central Victoria. News of the event has resulted in at least one station declaring it has enough going for it that a project based DATV transmitter will be fast-tracked in time. More details can be expected on this one from Peter VK3BFG as final details are still being worked through at this stage.

National Park weekend

A special focus for the Keith Roget Memorial National Parks Award, and the Centenary, will be held on the weekend of 19/20 November.

Award Manager Tony Hambling VK3VTH reminds us that the award is to encourage portable operation in Victoria's designated National Parks.

Plenty of activity has already occurred, but activity on 19/20 November will hopefully see a number of the parks put on air over a single weekend.

With so many parks it's not too far for people to travel and reach one, or even more. Registrations including the day/time and preferred frequency(ies) are welcome. The best starting points are www.amateurradio.com.au/awards and vk3vth@amateurradio.com.au

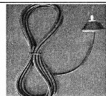
Foundation class on offer

The next quality Foundation licence weekend is on 10/11 September. Training both for the written multiple choice paper and the practical test happens on the Saturday. Apart from some revision, Sunday is when candidates undergo their assessments of competency.

All this happens at the Amateur Radio Victoria office, 40g Victory Boulevard, Ashburton. For more details contact Barry Robinson VK3PV at 0428 516 001 or vk3pv@amateurradio.com.au



TET-EMTRON



Base and Lead sets.



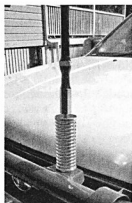
Codan Springs and Whips.



Mobile Mounts.



HF Base and Springs.



New ATW3040 HF + 6 metre Whip. Designed to be used with an Auto tuner (like the AH-4 or SG-237) for maximum efficiency. Made of fibreglass and coated with a tough flexible polymer finish. See the website or ring for more details.

Check out our new range of baluns at:-
www.tet-emtron.com



NEW!



See our wide range of new mobile parts and products at:-

www.tet-emtron.com

TET-Emtron

80 Stock Road, HERNE HILL, WA 6056

Phone: 08 9296 3224

G'day Old Timer! What's in a name - plenty or nothing?

Ian Godsil VK3JS,
Secretary, RAOTC Australia Inc

All through the ages people have coined nicknames for other people and things. Sometimes they are quite descriptive names, sometimes just nonsense. What is an 'oozit'? Who is 'what'shisname'? What is a 'thingamajig'? There are many much later names which older people may have never heard.

Names have always been important, for without one we and all objects have no definition and no status. How would you define a cat, or a dog, or a desk if you had no reference point in your language for such objects?

It is the same with people. Our parents gave us a name - Bill, Don, Betty and so on - by which we became established members of society. Sometimes those people will be given different names, for example Digger, Shorty, Macca or names in keeping with their positions or jobs, for example Gopher, Boss, Sparky, and Mr Fixit.

The term 'Old Timer' could easily conjure up an image of a member of a past generation or someone involved in the early history of Australia. 'Old Timer' in general usage is a friendly appellation not unlike 'Mate' but with reference to someone who is experienced and has been around for a while.

In our hobby of amateur radio, the term 'Old Timer' is a term of respect for one's ability and years of service. It has nothing to do with age.

If you have been licensed for 25 years or more, you earn the name 'Old Timer' because of your years in



the hobby. You may not have been very active and you may not be very old, but you have held the licence for 25 or more years and gained some experience in that time.

The Radio Amateurs' Old Timers' Club of Australia Inc (RAOTC) adopts the criterion of being licensed for 25 years as its entry point for Full Membership of the club. It does not imply that one must be of vast age, just licensed a long time. Often when amateurs, even septuagenarians, are invited to join the RAOTC their first response is, "Oh, I'm too young for that!" It is entirely possible that there are many forty-year-olds who qualify for full membership.

The RAOTC is always happy to welcome new members and, if you have been licensed, or qualified to hold an amateur licence for 25 years or more, then you are invited to join us. There is also an Associate membership for those who have been licensed between 10 and 25 years.

The club focuses on historical aspects of the use of radio over the

century or more since it all began. In particular we want to record the personal histories of Australian radio amateurs and their involvement in the history of radio. This does not mean to say that there is no interest in present developments as today's research becomes tomorrow's history. We do like to record, and remember, the work and progress that has helped us all to enjoy the hobby of amateur radio.

The club magazine *Old Timers' News (OTN)* is published twice per year and is one of the best club magazines anywhere in amateur radio. In keeping with its historical bent it is not a coloured glossy but a professional-quality black and white journal printed on good quality paper with feature-packed articles. *OTN* is most ably edited and published by Bill Roper VK3BR who is well-known to many older radio amateurs around Australia.

In addition to the magazine, the RAOTC conducts monthly news and information broadcasts throughout Australia on a multitude of frequencies, holds regular luncheons and also has an annual old-rigs-on-air activity.

We would love to have you on board as members of our club and we invite you to have a look at our web site www.raotc.org.au. There you will find information about the club, be able to listen to some of the monthly news broadcasts, and download a membership application form.

Why not give it a go Old Timer? Membership fees are quite low.



Coming Events

15 – 18 August

VK3 – Bogong High Plains Winter Expedition.

28 August

VK2 – Blue Mountains Amateur Radio Club WINTERFEST.

VK7news

Justin Giles-Clark VK7TW

Email: vk7tw@wia.org.au

Regional Web Site: <http://reast.asn.au>

Congratulations to David VK3HZ/3 and Rex VK7MO/2 having set a new national 10 GHz digital modes record of 731.0 km on 14 May, 2011. Congratulations also to the VK7 Radio and Electronics School facilitators - Tony Bedelph VK7AX, Peter Rumble VK7IY, Reg Emmett VK7KK and Ben Short VK7BEN who received a mention from WIA President Michael Owen at the Darwin WIA AGM. We also welcome our new VK7 Regional News Broadcast reader Peter Dowd VK7PD who has volunteered to read our local VK7 Regional News each month. On ya Peter!

In repeater news, unfortunately a silent key notice for VK7RNE 146.725 MHz on Tower Hill in north east Tasmania. Joe VK7JG lets us know that following severe storms, the hut

housing the repeater equipment was blown off its foundations and landed upside down a little way down the side of the mountain. The equipment has been retrieved and there are no plans at this time to reinstate the repeater.

Northern Tasmania Amateur Radio Club

June 8, 2011 saw a great presentation from Mark VK7FMWT and Joe VK7JG on the Tamar Coast Guard. Mark, who is a volunteer with the TCG, gave a brief outline of the history and the role of the organisation, which is the day to day safety of maritime vessels, along with some interesting stories. Joe then outlined the radio installations that he maintains for TCG and the frequencies used. By all accounts an excellent presentation, thanks to Mark and Joe. At this meeting Jason VK7ZJA resigned as NTARC Secretary and was thanked for his huge contribution over the years as Secretary and Vice-President. We welcome Yvonne Maxwell VK7FYM who has volunteered to take on the role of

Secretary for the balance of the year.

A reminder from Yvonne that NTARC meets informally for coffee each Monday and Friday at Friends Cafe, in Jimmy's shopping complex off Charles Street, Launceston.

On the last Monday of each month, the coffee venue switches to Lilydale, where we visit David VK7YUM and Norma VK7FOOD at their cafe in the main street. Love those callsigns!

Cradle Coast Amateur Radio Club

In May, CCARC visited the Wynyard Aero Club at Wynyard airport, and which included a tour of the hangars and joy flights around the very picturesque Wynyard and Boat Harbour areas. Attendees were treated to a great BBQ from host Eric VK7NFI cooking the snags and burgers to perfection. A big thank you to Eric and the Wynyard Aero Club members for the use of their facilities, and providing flights.

North West Tasmanian Amateur TeleVision Group

Tony VK7AX has added a new audio stream to his broadcasts entitled

Continued on page 39



tts systems

www.ttssystems.com.au

Phone: 03 5977 4808 Email: info@ttssystems.com.au

Your Australian reseller for:



...America's Best!



AVAILABLE NOW

Hard Drawn Copper Wire
Insulators, Dipole Centers
Open Wire Transmission Line
Spreaders, Kevlar Guy Line
Spiderbeam Fibreglass Poles
Baluns and Switches



Meanwell power supplies
Diamond products
Daiwa products
Technical books
Amidon products
Custom cables made to order

As always, you can get a free catalogue - just call!

See you at the Shepparton Hamfest 11 September 2011

John Ferrington VK6HZ
vk6hz@wia.org.au



Photo 1: HARG at the Pickering Brook Agricultural Show.

Greetings all from VK6! Finally we are having some rain! I know that most of you on the east coast will not understand why we get excited about rain over here, but trust me, after months of nothing but blue sky it is nice to have some rain!

A few things have been going on around here over the last few months.

First, over to HARG for an update. **The Hills Amateur Radio Group**

(HARG) was once again busy out in the field during May. On Saturday 7 May, the club put on a display at the Pickering Brook Agricultural Show. Club members attending were Bill VK6WJ, Richard VK6BMW, Martin VK6ZMS, Marty VK6FDX, Allan VK6PWD, Onno VK6FLAB, Craig VK6FLAM, John VK6FJON and Steve VK6IR. Other visitors were Jim VK6JIM, Steve VK6CS and Phil VK6ZKO. We did not have many visitors from the general public but Phil from the Army Vintage Vehicle Display was very interested and amazed at the small size of our rigs as he had just been learning how to operate a No 19 set!

We operated VHF, UHF and HF despite the considerable RF and PA noise. HF antenna was Onno's 12 metre squid pole with remote antenna tuner at the base and using a neighbour's long trailer as a

counterpoise. Richard set up his SDR receiver with interesting spectrum displays on a laptop and we put up a number of static display panels. Next time we will need something more to attract

the public and Richard has suggested a fox hunt. Could be fun!

As I was writing this I received the sad news that Dennis Muldownie VK6KAD had passed away. Dennis ran the weekly WIA news service in WA for many years. He was also a regular in the RD contest each year. He will be missed by all in VK6. Vale Dennis.

Up at NCRG we have recently installed a new 3 kW solar power system. Here's an update from Wayne VK6EH.

Recently the NCRG had a solar power system fitted to our

clubrooms; this was funded to a large extent by our now departed friend Neil Penfold VK6NE SK, who passed away in the latter part of 2010.

The system has a power rating of 3 kW and a recent check of the output record showed that it had output some 4.8 MW since being installed during November last year. The system will be fully up and running as soon as a digital meter is installed to track usage and in-feed values. The power consumption can be quite high, particularly in contest season where we can run 24 and 48 hour stints with lights, air conditioners, radios and whatever all contributing to a high power bill each quarter and we are confident the very generous contribution by Neil will serve us well into the future.

Do not forget the NCRG HAMFEST on 7 August at the Cyril Jackson Recreation Centre in Ashfield. It will be a great day as usual! I look forward to seeing you all there.

If you have something to submit for the VK6news, please email me at vk6hz@wia.org.au 73 for now.



Photo 2: The solar panels on the NCRG clubrooms roof.

VK4news

Bundaberg Amateur Radio Club

Gail Lidden-Sandford VK4ION
Secretary

Yes, Bundaberg is in the news again with details of another special event.

The Bundaberg Amateur Radio Club has been a WIA member for 50 years and it seemed appropriate that we host the Queensland President's Luncheon. We were already planning our 50th Anniversary Reunion for October so it was no trouble to extend the celebrations over the whole weekend. The President's Luncheon will be a working day on Sunday, 9 October and will commence with the news broadcast from the clubrooms in the SES Headquarters. While the Presidents get down to business, we will whisk the wives and partners away to some thriving markets to soak up the atmosphere and sunshine in Bundy.

WIA President Michael Owen will be in attendance along with Queensland WIA representatives Ewan McLeod VK4ERM and Mike Charteris VK4QS and invitations have been sent to all the Queensland clubs. We are hoping for a strong turnout of Presidents, Executive and interested members from far and wide.

Our technical director Ross Orpin VK4JRO will organise tours to some of our repeater sites for those visitors who want to see how we cover this extensive and geographically diverse region. Please indicate your interest in the tours when you make your bookings so we can accommodate everyone. The club also wants to locate past members who have moved away and hope that by making it a full weekend of activities many will decide to make the journey.

We are ideally located and promise to show all our visitors a good time so please check the club's website www.barc.asn.au and follow the 50th anniversary links for information on both the reunion luncheon and the Queensland President's Luncheon.



Plan NOW for
JOTA/JOTI 2011!

Contact your
local **Scout** or
Guide group.

Electronics One Stop Shop

Jaycar Electronics - Better, More Technical

Rotary Coax Stripper

A handy stripper that will strip the outside jacket and inner conductor in one operation. Simply rotate the stripper clockwise around the cable 3 to 6 times. A quality stripper suited to installers.

- Suitable for RG58/59/62/6 and 3C2V 75 ohm cable
- TH-1820

\$19⁹⁵



Heavy Duty Ratchet Crimping Tool

This tool is manufactured from quality carbon steel and fitted with hardened and tempered jaws. Suitable for crimping insulated terminals from 0.5mm² to 6.0mm² in size.

- Dimensions: 220(L)mm
- TH-1829

\$39⁹⁵



Autorangeing Pocket DMM

A handy pocket DMM with plenty of features. Large LCD display with 4000 count, autoranging measurement with data hold and relative function. Replaceable leads make this a perfect companion to any technician, field engineer, mechanic, or even a handyman. Also measures frequency, capacitance, and duty cycle. See website for full specifications.

- Dimensions: 115(H) x 60(W) x 16(D)mm
- QM-1328

\$29⁹⁵



Gas Soldering Tool Kit



This kit features an adjustable tip temperature up to 580°C & ignition is achieved by the internal piezo crystal mechanism. Runtime is around 2 hours on a 30 sec refill. The protective end cap also acts as a safety gas shut off when replaced. The kit includes all of the following parts;

- Storage case
- 2.4mm double flat tip
- 4.8mm double flat tip
- Hot knife tip and air deflector
- TS-1328

\$159⁰⁰

Super Long-Life Low Noise Maglev Bearing Case Fans

Featuring a patented NanoFlux bearing that incorporates magnetic levitation technology, these premium quality fans ensure an extremely long operational life, extremely low noise levels compared to traditional ball bearings, and also offers the ability for the fan impeller to be removed for cleaning. Dust and water proof to IP54, these fans are sure to last even in harsh conditions. See our website for full specifications.

- 12VDC
- Flylead with 3 pin molex connector
- Polycarbonate housing
- UV reactive polycarbonate impellers

12VDC 80mm	YX-2580	\$24.95
12VDC 90mm	YX-2582	\$29.95
12VDC 120mm	YX-2584	\$34.95

From **\$24⁹⁵**

NEW



12VDC 100A Adjustable Dual Battery Isolator - VSR

This dual battery isolator, or voltage sensitive relay (VSR), is the link that allows both batteries to charge whilst your engine is running, but keeps your main engine cranking battery isolated from being discharged by your 12V accessories once camped. Cut-in and cut-out voltages are independently user adjustable and it also features a manual override/jumpstart function.

- 100% solid state technology with extremely low standby current and voltage drop
- 10 user adjustable cut-in/cut-out voltages
- Emergency over-ride feature
- Dimensions: 162(L) x 75(W) x 50(D)mm
- MB-3680

\$119⁰⁰



NEW

To order call 1800 022 888
www.jaycar.com.au

Jaycar
electronics
Better, More Technical

Parkes Radio Club and VK2BPK are back

Phil Derbyshire VK2FIL



Photo 1: The general set up of the station.

The Parkes Radio Club has now reformed after a number of years of inactivity.

There are now plans to extend the range of the club 2 m and 70 cm repeaters, VK2RWM, via linking to additional club repeaters to cover the central west. This is a facility sadly lacking in the region. The area west of Orange, while covered by the Orange repeater, does have areas where there is no coverage. Additional 2 m repeaters are planned to be located so as to increase the coverage along the Mid West Highway, Cowra, Young, Canowindra and similar areas.

The revamped club has taken a slightly different approach from the past and other clubs. Instead of being a club for just one locality or town, it now represents a region, in this case the central west of NSW. The members come from Young in the south, West Wyalong in the west and from Bathurst and Orange in the east, not to mention Forbes and Parkes. The original club call sign, VK2BPK, has been reassigned to the club and was used for the first time in many years in the 2011 John Moyle Field Day Contest.

On the week end of 19 and 20 March we held our first official gathering, this being the JMFD week end. We were active on all bands from 80 m to 23 cm. Four members took part in the activities and we set up two stations, one per tent, to cover all the bands.

The location was the Grenfell repeater site, which is located just north of the town of Grenfell.

The activities were somewhat stopped for a few hours on Saturday afternoon when a rather large (and cranky) brown snake, about 1.8 m long, decided to crawl under one of the tent's floors. Even though we saw the snake poke its head out from the under the tent floor, we never saw it leave the area. This was despite us lifting the floor, removing the car which was attached, and making a lot of noise banging the ground and tent. When we felt that all was clear, a rather nervous crew manned the HF part of the contest station.

Most points were gained on 2 m and 70 cm – the tent not disturbed by the snake! The HF bands (tent) were interrupted by the proceedings with the snake. Conditions were not brilliant on any bands although contacts were made all over the nation on the HF bands. 23 cm was fairly disappointing with only a hand



Photo 2: Tim VK2ZTH, Bob VK2ABP, Phil VK2FIL and Paul VK2WPT.

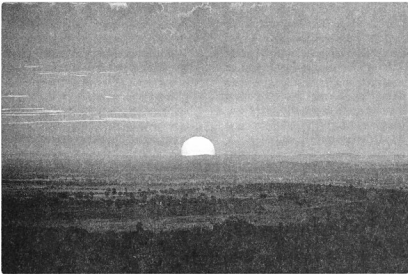


Photo 3: Just the end of a great day – a view from the site on Saturday evening.

full of contacts being made.

During the night a fairly strong wind developed and caused the mast with the 6 m and 23 cm dish to fall over. This was repaired first thing in the morning and was back in

action fairly soon after the repairs.

All things considered it was a successful event; if nothing else we all had a good, and at times exciting, time.

Photos by Bob Paton VK2ABP and Phil Derbyshire VK2FIL.



CCARC at Mersey Bluff Lighthouse

Keith Winkler VK7KW

For the ILLW in 2010, the Cradle Coast ARC activated the Mersey Bluff Lighthouse AU0040 at Devonport. Arriving mid-morning Saturday, Winston VK7EM and Dick VK7FORF erected Winston's mast and wires for his inverted V 80, 40 and 20 metre antennas, as well as Winston's squid pole vertical for 40 and 20 metres.

We nearly froze as the wind was very strong and cold! That weather lasted all day and well into the evening. The operating station used a FT-857D with battery bank providing some 160 amp/hours capacity. Dick remained both for company and as second operator. We kicked proceedings off about 10.30 local on 40 metres with several AU contacts. We switched to the 20 metre squid pole and again had several contacts. Throughout the day

we operated on 40 and 80 metres with quite a few Australian stations.

During the evening Dick had to return to his QTH, so I carried on making good contacts in AU and one only from NZ. Contacts continued Sunday morning - and the weather had improved, delivering a glorious morning.

The station was dismantled about 11 am, luckily, just before rain came from nowhere. In all 41 contacts were made with Lighthouse stations and other interested parties. Amateurs who visited were Brian VK7KBE and Kevin VK7HKN, and various members of the public enquired of our presence there. It was a most enjoyable weekend. Look for Winston VK7EM and myself (as second operator) from the same site this year.



COM-AN-TENA

Australian made antennas setting a new standard

Co-linear 10/11 m vert 6 dBd	\$270
10/15/20 3 el. ea band 1 coax	\$680
Log-periodic 9 el. 8.4 m boom	\$1194
20 m 4 ele boom 7.9 boom h/duty	\$796
Log-periodic 7/30 13.7 m boom	call
15 m 3 el. 3.6 m boom	\$314
M/b vert auto switch 10-80 m	\$360
40 m lin load 2 el./cap hats	\$670
6 m 5el. 3.6 m boom	\$314
23 cm 36 el. 2 m boom N-conn	\$249
70 cm hi gain Yagi 3 m boom	\$170
2 m 10 el. hi gain Yagi	\$190
Quad 2el. 20 m h/duty	\$596
Quad 3el. 10/11 m h/duty	\$494
10/15/20 vert with radials	\$289
Rotatable dipole 40 m	\$298

Guyed masts 13 or 21 metres

Winch up, tilt-over, aluminium and stainless steel three sided construction. Auto brake winches.

115 John Street
Glenroy VIC 3046

Phone

0419 542 437

Tim Mills VK2ZTM
vk2ztm@wia.org.au

This month the **Oxley Region ARC** will be holding their AGM at 2 pm on Saturday 6 August 2011 at the SES HQ in Central Road, Port Macquarie. Besides the AGM business there is a Notice of Motion to adopt a new Constitution which has been amended to comply with the requirements of the Associations Incorporation Act 2009. Oxley Region ARC will be activating special event callsign VI40BOR during the RD and Lighthouse weekends. Also during the anniversary of the club in early October.

On Sunday 7 August the **Summerland ARC** will be holding their annual SARCFEST at the club rooms. On Sunday 28 August the **Blue Mountains ARC** will be holding their annual WINTERFEST; the location was not known when these notes were compiled. Also to hold their AGM will be the **Illawarra ARS** on Tuesday 9 August. The **Mid South Coast ARC** have their AGM planned for Saturday 13 August.

The **Central Coast ARC** have advised that the 2012 Wyong Field Day will be on Sunday 26 February 2012. This month members of the CCARC will be operating from Nobby's Head Lighthouse in Newcastle. More details on all their activities at www.ccarc.org.au or 02 4340 2500.

Having just been on Lord Howe Island with VK9HR the **HARAOA Group** will activate Montague Island OC-223 during the Lighthouse weekend 19 to 22 August - using the club call VK2CL. They are seeking more operators: contact Tommy VK2IR by email or 0413 005 511.

Last month the **Waverley ARS** held their annual auction. At month's end the **Albury Wodonga ARC** held the Riverina Field Day and **ARNSW** had their bi-monthly T&T at VK2WI Dural. In June the **Oxley Region ARC**, as part of their 40th anniversary conducted their annual field day. Despite the wet and windy weather that rolled into Port

Macquarie, as well as other parts of the mid north coast, the event was a great success with 80 registrations and a full program of activities.

Congratulations to Ashley VK2XSO from Tamworth on winning the coveted title of Fox Hunt Champion. Craig VK2ZCM was the runner up. Well done to all eight hounds who braved the elements to contest the seven foxhunts over the two days. Lyle VK2FCVI took out the award for the Best Presented Amateur Vehicle and Bill VK2ZCV was winner of the Home Brew Display. The Tacking Point Surf Club Hall was an excellent venue. The traders, which included Amateur Radio NSW and ALARA, were very popular. As usual there was intense activity around the disposals tables. Everybody was well fed over the two days by the hard working barbeque and kitchen volunteers. 42 people enjoyed the Field Day dinner at the Tacking Point Golf Club on the Saturday night. ORARC President Henry VK2ZHE thanked everyone who contributed to the success of the weekend. As part of ORARC celebrations they have the special callsign VI40BOR which was operated during the weekend and will be operated at intervals until the end of October. The next major part of the celebrations will be over the holiday weekend of 2 October, the date of the club's formation. Also in June the **Wagga Wagga & District ARC** held their AGM.

Some of the VK2 clubs planning to operate during the International Lighthouse and Lightship Weekend on 20/21 August will be the **Central Coast ARC** from the surrounds of Nobby's Head Lighthouse in Newcastle, **HARAOA** from Montague Island, **Oxley Region ARC** from Tacking Point Lighthouse at Port Macquarie and **Illawarra ARS** will be at Point Perpendicular at Jervis Bay. Usually the **Manly Warringah RS** go to the Barrenjoey Head lighthouse at Palm Beach. **Waverley ARS** will

pick one of the eastern suburbs lighthouses. **Summerland ARC** have several to choose from on the far north coast. There are plenty more sites in VK2. If your club or group plans to activate a location, register and put a news item into VK2WI and VK1WIA News. Do not forget the weekend before, 13/14 August, is the annual RD. The rules were in July AR, and VK2 needs your submitted log.

The annual picnic of the **Illawarra ARS** will be held on Saturday 10 September at Blackbutt Reserve, Barrack Heights. There will be fox hunts, the BBQ and the HF radio booth will be set up. Members of the **Illawarra ARS** are planning a visit to the Dayton Hamvention in May 2012, advises Secretary Ross VK2VVV. Do not forget the crystal set construction project due by year's end. More can be found at www.iars.org.au

Many repeater groups often have difficulties accessing their systems at shared sites. OH&S and management requirements now often create long delays for access. This happened with **St. George ARS** with their Heatcote 6800 system when an antenna fault developed. **Orana ARC** at Dubbo are planning to shift their VK2RCD 6725, advises David VK2AYO, to a location of easy private access.

HADARC at their recent AGM increased annual dues from \$22 to \$25 to help offset the rising costs that all groups face. At their June monthly meeting Phil VK2ASD, WIA Vice President was the guest speaker. HADARC have also taken the VK2RNS packet out of service. **St. George ARS** have obtained a batch of AWA RT-85's which have been modified for two metre operation and programmed with a large number of channels. Some were reduced in power for Foundation licence holders.

ARNSW is currently conducting an upgrade course at the VK2WI site,

which has recently passed the half way mark, advised Terry VK2UX, who is the instructor. Terry is interested in conducting a Foundation course. If you know anyone in the Sydney region interested in attending such a course, suggest they register their interest with a phone call to the office, telephone 02 9651 1490 or 0400 445 829 with contact details.

ARNSW provides a T&T service on the last Sunday of the odd numbered months, the next being 25 September. There is also a service

for deceased estates along with sales of surplus equipment and details can be found on the ARNSW web site at www.arnsw.org.au On these Sundays, licence assessments for all grades are conducted in the morning. In the afternoon the Radio and Homebrew Group meet at the VK2WI Dural site following the T&T in the morning. The weekly VK2WI news is aired twice on Sunday and is available for all forms of news and happenings from clubs, groups and individuals. Email your item by

Friday afternoon to news@arnsw.org.au If you are sending an item off to National News then include a CC to VK2WI for the additional coverage provided by VK2WI on most HF frequencies and VHF/UHF through many centres. We are always interested in additional relay stations throughout VK2. For details email calbacks@arnsw.org.au

73 TimVK2ZTM

VK3news Geelong Amateur Radio Club - The GARC

Tony Collis VK3JGC



Carlo VK3BCL, David K1ZZ, David VK3QM and Harold WJ1B.

New Licensees

The GARC extends its congratulations to three new licensees, two Foundation level and one Standard level.

This is also a testament to the training scheme run by Peter VK3ZAV, Colin VK3NCC and Lee VK3PK and the GARC assessors Ken VK3NW, Andre VK3AVZ and Rex VK3ARG.



Dana VK3FDJV, who is only 12 years old.

Visit by GARC members to ARRL Headquarters

David VK3QM and Carlo VK3BCL recently spent several weeks touring in the USA. The tour included a visit to the ARRL HQ at Newington, Connecticut, and also the witnessing of the last launch of the Endeavour shuttle, mission STS-134, which was carried out at 8.56 am on May 16. They also attended the Dayton Hamvention, and ended up buying several Kg's of gear that is difficult to source in Australia.

On Friday, May 13, David VK3QM and Carlo VK3BCL drove to the ARRL HQ in Hartford, Connecticut. There they met briefly with the CEO Dave Sumner K1ZZ and COO Harold Kramer WJ1B. Founded in 1914, and with more than 156,000 members, ARRL is the largest organization of radio amateurs in the United States.



Colin VK3NCC.



Andrew VK3FATM.



Photo 2: Carlo VK3BCL pictured outside the ARRL HQ.

Foundation Corner 16 – Test equipment (for the F-call) in the 21st century: Home brewing revisited!

Geoff Emery VK4ZPP - vk4zpp@wia.org.au

One of the restrictions on the holder of a Foundation licence holder in VK-land is that they cannot legally open the covers of their radio(s) to make adjustments. However, with the newer generations of radios that come from the major manufacturing stables, the menu systems allow almost infinite adjustments of operating parameters by pushing front panel buttons.

A difficulty that has been observed with some rigs that cover both HF and VHF/UHF is setting the audio characteristics for good intelligibility on SSB and FM. A better method than doing multiple adjustments and getting verbal reports from other operators must be available. Sometimes it is a case that a picture is really worth a thousand words.

It has been the practice over the last century to provide ways of visualising what happens with electric/electronic signals. There were methods of printing Morse code before we had wireless. The cathode ray oscilloscope has been around for over half a century. One way of seeing what is happening, as it happens, has been to display signals on the screen of a CRO.

Photo 1: The completed resistive tap.

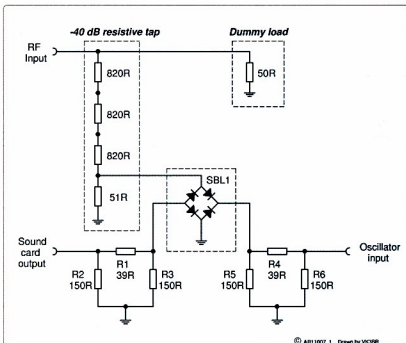
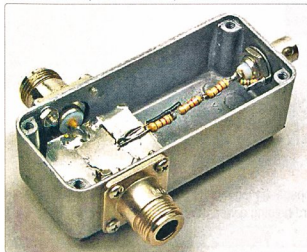


Figure 1: 40 dB power divider, from <http://astromag.co.uk/ssa/>

At the high end of the market are the instruments known as spectrum analysers and even on the second hand market good brand name RF spectrum analysers can be worth more than a good second hand

car. These days there are many software applications for using the ubiquitous computer sound card for displaying audio and supersonic signals on the PC.

I suggest for further reading, a look at page 22 of the Foundation Manual for

an explanation of the modern oscilloscope and spectrum analyser and their uses.

Several years back, Jim Rowe, from *Electronics Australia*, produced a home brew spectrum analyser based around a TV tuner module and followed this with the design of a comb (marker) generator and a mixer for viewing HF signals.

Since Jim Rowe's article, there have been many designs published and available from the internet. It was from the internet that this project was gleaned, refer Reference 1. From *Dave's Astronomy Magazine* comes the design that combines some basic home brewing and some free software – 'A Simple Spectrum Analyser by G4AON'. This project uses a part of a project 'Simple RF-Power Measurement' published in *QST*, June 2001, refer Reference 2. This part is a resistive 40 dB power

divider which allows the signal from a 100 watt transmitter to be used with low power measuring equipment.

Figure 1: 40 dB power divider, from <http://astromag.co.uk/ssa/>

For me this has been a happy co-incidence, as I have finished the VK5JST RF antenna bridge, refer Reference 3, and I was looking for convenient methods of getting a suitable source of low level RF. I built my bridge without the dummy load/attenuator with the hope of using the grid dipper and signal generator. Use of a 50 ohm termination with sniffer tap was rattling around in the head before I found these articles. Just proves that other people have probably thought of it too.

The power tap is constructed in a suitable die-cast enclosure and uses:

1. Small die cast box, Jaycar PN HB-5062 or similar.
2. 2 off N series bulkhead mounting connectors.
3. 1 off 50 ohm BNC bulkhead connector.
4. 1 brass shim 25 mm x 32 mm approx.
5. 3 off 820 ohm 0.5 W carbon film resistors.
6. 1 off 51 ohm 0.25 W carbon film resistor.
7. 1 piece 22 swg wire approx 15 mm.

As part of the spectrum analyser, we need a termination, dummy load, and some radio clubs are promoting building these using precision 50 ohm resistors mounted with adequate heat sinking. The mobile phone service is providing quality terminations which can be bought at hamfests and on-line sales/auction

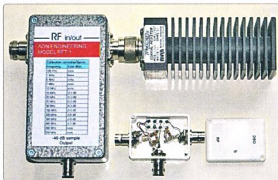


Photo 2: The complete test set up, showing the mixer at bottom right.

sites. Remember to choose your load to handle the power you intend to use. A precision 30 watt load will cook into a paper weight if fed 100 watts for too long.

Now this brings us to the last item of the spectrum analyser to build. The original part used is the Mini-Circuits SBL-1 which is an obsolete diode ring mixer; not to despair, this part has been replaced with the smaller (for surface mount boards) ADE-1, refer Reference 4 and 6, which actually has slightly improved specifications.

What this project does is allow a signal generator to mix with a fixed frequency signal and by the heterodyne (mixing) process produce an audio frequency which can be processed by a computer sound card and displayed on the monitor. Think of this in the same light as a TRF receiver with a visual rather than an auditory output.

To protect against overload and distortion, the diode ring mixer is buffered by 6 dB attenuators from the signal source and to the sound card. As noted in the article, if the signal generator is designed

to operate into 50 ohms, the attenuator pad may be dispensed with and similarly with some sound cards the pad on that side may be replaced with a 50 ohm terminating resistor instead.

In order that we get the nicely coloured graphics, we need some software to accomplish the processing and the recommended program is DL4YHF's Spectrum Lab, refer Reference 5.

In putting together this piece of equipment, we have constructed a RF attenuator usable to over 500 MHz; a RF mixing module usable to about 500 MHz and possibly made a termination also usable over a similar frequency range. By combining suitable testing modules, we have the capacity to expand the equipment into more configurations of use to the home brewer.

In summary, by building an RF tap, using a dummy load and a signal source such as a signal generator, even a dip oscillator in combination with the shack computer, today's amateur can look for ways of improving the transmitted signal from his station and monitor other signals.

References

1. <http://www.astromag.co.uk/ssa/>
2. <http://rfplus.jonwright.org/data/qst200106.pdf>
3. <http://www.users.on.net/~endsodds/vhfuhf.htm> AR June 2006
4. <http://www.minicircuits.com/pdfs/ADE-1.pdf>
5. <http://www.qsl.net/dl4yhf/spectra1.html>
6. <http://www.minikits.com.au/doc/section10.pdf>

VKLOGGER

**Are you an active radio amateur?
Interested in what might be happening NOW
with regards propagation?**

Consider registering on vklogger.com (free). Three propagation loggers (HF, 6 m, and 2 m, 70 cm and above, plus chat channels and a large discussion board holding a wealth of information.

<http://www.vklogger.com/>

Home brewing a mobile HF antenna

John McLean VK2KC

After a long discussion with local amateur radio operator Paul VK2DEL on the merits of different types of HF mobile antennas and, after reading an article in the July edition of *Amateur Radio* by David VK5DWC, covering his experiences with a very long mobile HF antenna, various types of mobile antenna and their efficiencies were discussed at length. Further, having noted the success of my High Sierra HS1800 motorised antenna during a trans-Australian trip last year, it was decided that a reasonably efficient tapped mobile antenna could be home brewed, using the junk box as a source for parts.

This project led me into a lot of research on the subject. My extensive library, plus the internet's limitless resources, led me to design what I figured should be a very efficient HF mobile antenna. It was found that if the loading coil diameter was maximised, and fitting of a 600 mm diameter capacity hat at the very top of the antenna, then the end result should be a reasonably efficient radiator. Weight and wind resistance were a consideration, so every effort was made to keep these factors in mind. Further research showed that for maximum antenna efficiency, the loading coil should be placed at the top of the antenna, but this was ruled out due to the fact that the coil would have to be almost twice the length of one mounted midway, and the excessive wind resistance would be a problem.

An article by Mark Lowell N1LO, of a tapped mobile HF antenna, complete with a diagram, showed

a lot of promise and, with reports of outstanding on-air performance from those who had built one, led us to believe that with what resources we had on hand, the N1LO design was the best option.

N1LO's antenna looks very much like the renowned 'Texas Bugcatcher', produced for 30 years in the USA. Sadly, as of 31 October, 2009, Henry Allen, the builder, retired with no one to take over the business.

The fibreglass rod used for the mast was an old HF whip of unknown origin being just over 2400 mm long and 15.9 mm in diameter. The top brass ferrule

was removed using a heat gun and then 50 mm long brass sleeves were machined up and slotted radially in four places to take four lengths of 15 mm wide copper strap. These were bent at right angles on one end to allow them to be bolted to the inside of the coil former. These copper straps were silver soldered to the sleeves, making up a four-legged spider, and the sleeve body slotted vertically to enable them to be clamped firmly to the fibreglass rod.

A piece of 100 mm diameter PVC stormwater pipe was selected for the coil former and a 250 mm length cut, and an eight-

threads-per-inch groove machined in it on the lathe for 40 turns. At this stage we were flying blind as to how many turns would be required, as the dimensions differed from the antenna built by N1LO. A series of overlapping slots was machined longitudinally in the PVC coil former to allow the taps to be soldered to the coil at the resonant points later on; also to reduce the wind drag at highway speed.

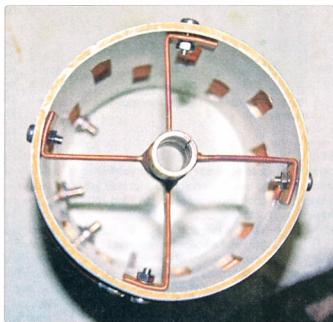


Photo 1: The coil under construction – showing the two fabricated 'spiders'.

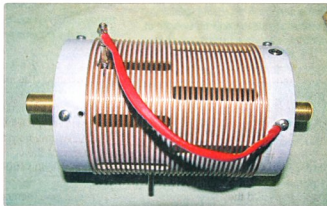


Photo 2: The completed coil.

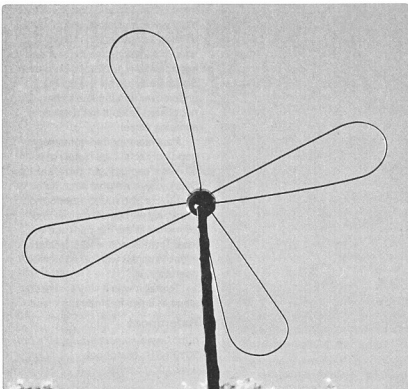


Photo 3: The four-leaf configuration capacity hat.

The two fabricated 'spiders' were then bolted to the top and bottom of the coil former. Then 40 turns of 2 mm diameter hard drawn copper wire were wound on the former and secured with bolts. This allowed a short jumper wire from the bottom of the coil to connect with the top of a 1200 mm length of 2 mm copper wire which had been wound on the lower part of the rod. This in turn was soldered to the bottom-mounting ferrule and terminated on one of the arms of the bottom of the coil support. A further 1200 mm of 2 mm copper wire was wound around the fibreglass rod above the loading coil, and then bolted to the top of the coil spider and soldered to the top ferrule that had been removed earlier.

Then a capacity hat mounting hub was machined to allow 8 x 3 mm aluminium radials 300 mm long to be fitted. This assembly in turn was fitted to the top ferrule, locking it into place using two 4 mm grub screws. It was decided to use four 600 mm pieces of 3 mm hardened aluminium wire and bend each one into a 'U' and they were fitted

to the hub. This gave a four-leaf configuration. Allowance was made for a 200 mm stinger to protrude above the capacity hat. As it turned out, this allowance proved to be very fortuitous. Further research has revealed that a 300 mm diameter full circle capacity hat has the same capacity as the 600 mm cloverleaf type. This idea will be utilised on the Mk2 version at a much later date!

Now it was time to fit the antenna to the vehicle. In this case it was a Nissan Patrol, which has the standard 4WD HF mount fitted at the rear of the vehicle close to the spare tyre.

Using an MFJ antenna analyser, a resonant point was established at the desired operating frequency of 3.6 MHz, and this was found at the 37th winding. The antenna was removed and another coil former was manufactured; this time a lot shorter than the prototype as we were able to cut three turns from the original coil and mount the coil 'spiders' within 5 mm of the end of the coil windings.

The unit was then reassembled

and rechecked for resonance at 80 metres. Having achieved this, 40 metre and 20 metre taps were then found and once those points were established, the antenna was removed and banana jacks were then modified to enable them to be soldered to the coil for the 40 metre and 20 metre bands.

To make the sockets, binding posts (Jaycar PT0640) were stripped of all their hardware and then cut with a mini hacksaw across the hole, leaving a semi circular indent to mate with the coil winding. A chamfer was filed on both sides parallel to the half hole so that they would clear the adjacent coil windings. Then the modified sockets were soldered in the correct position on the coil. A small wander lead was made up to allow the taps to be selected using, naturally, a banana plug on one end. It was interesting to note that as a result of the High Q of the coil, the positioning of each tap was critical and even an eighth of a turn made quite a difference with respect to antenna resonance.

The final assembly included fitting of heat shrink over the top and bottom sections. The top ferrule was then epoxied into position, the loading coil assembly was fixed in position on the fibreglass mast using two stainless steel hose clamps, the capacity hat hub assembly fitted to the top ferrule, and the antenna was then fitted to the vehicle.

Much to our annoyance, it was found that the heat shrink had lowered the resonant points of the antenna. After some thought, this was remedied with the removal of the 200 mm stinger and this bought the antenna back into resonance. Thank goodness that the initial design, and tuning, included the 200 mm stinger! Murphy had lost this battle!

In building the antenna it was found that the feed point radiation resistance on 80 metres was 21 ohms, with a resultant VSWR of 2.5:1, but the reactance was almost zero. As the vehicle has an ATU fitted, the high VSWR was ignored. The most interesting part was that on the 20 metre band, the feed impedance was 45 ohms, with the reactance almost zero again.

This project certainly absorbed a lot of man hours, but both of us were determined to home-brew a decent performing HF mobile antenna, and this objective was definitely achieved. Many hours of frustration were experienced, but all obstacles were overcome with time and careful thought and, at times, re-engineering. The most costly item was the stainless steel hardware, as most of the components used were available in our junk boxes!

The antenna can be tapped at other points of interest, as the length of the antenna allows for any frequency of operation between 10 metres to 80 metres. It is just a matter of finding the resonant point and soldering another socket on the coil, even at commercial frequencies.

The downside of the antenna is that it is not at all portable. Being 2400 mm long, Mk2 plans are already on the drawing board. It is planned to make the antenna in

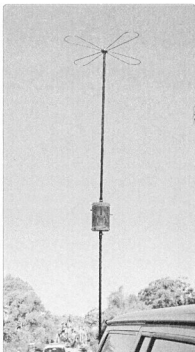


Photo 4: The completed antenna mounted on the Nissan patrol.

three parts. Top and bottom of the mast will screw into the loading coil, utilising some custom machined adaptors, making the longest part approximately 1000 mm long when disassembled. This will enable undercover parking lots to be negotiated without the dreaded scraping noise!

Paul has reported some very good contacts. One I know of is an 80 metre contact, at 1 pm local, into Sydney, with a signal strength of 10 over 9. He also found it performed extremely well on 40 metres and 20 metres in the car park at the local Town Beach, and it created a lot of interest with other amateur operators.

Overall it was a very interesting, albeit at times frustrating project!

References

<http://www.qsl.net/n1lo/mobilhf.pdf>
2010 ARRL Handbook
www.k0bg.com



Silent Key

Cmdr. Dennis A Smith ex VK5LS, 1920-2011

To those of you who have read "The Secret Wireless War" or "Edgar Harrison" (Winston Churchill's wireless operator) by Geoffrey Pidgeon, the name Dennis Smith may ring a bell. In Edgar Harrison's biography there was a chapter describing how Dennis led the R & D team of M16 (Sect VII) where, beside designing special wireless sets for the Army, Navy and Air Force, they also designed equipment for clandestine agents and special wireless intercept sets, etc. He wore many hats and many uniforms depending on his mission. Post WW II he was also known as G3AIS.

Dennis was born at Wimbledon in 1920. As a teenager he enjoyed classical music, was active as a Rover Scout and was enthusiastic about the new wireless technology that was evolving in the 1930s and built his first crystal set. He left school at age 15. His enthusiasm with wireless led to employment with Eddystone Radio where he embraced the communications technology.

When WW II broke out in 1939 Dennis was sent to Paris to set up the

Free Czech and Polish Radio Stations. From 1940 to 1946 Dennis and his team were located at Whaddon Hall, five miles west of Bletchley Park, where they undertook their clandestine work. In 1943 he was instructed to form a new unit that involved fitting specialized equipment into MTBs and MGBs.

Post WW II M16 recruited Dennis into the Royal Navy and he was posted to Malta. Dennis and family left Malta in 1952. In 1955 Dennis reverted to general service and served on HMS "Protector" in the south Atlantic. In 1957 until 1961 he served at the Weapons Research Establishment at Edinburgh in South Australia. On his return to the UK he had many more overseas appointments including Weapons and Electrical Officer with the 5th Frigate Squadron in the Far East based in Singapore. This led to a further posting to Melbourne, Australia where he was the General Overseer of Engineering and Chairman of the Post Design Services for the IKARA missile – an anti-submarine guided weapon. During this time he was active as VK3DIS.

In 1969 he transferred to the Royal

Australian Navy as Commander Dennis Smith RAN.

In 1984 he was appointed Chairman of the Veterans' Affairs Review Board. He retired in 1985 and spent the past 26 years enjoying his many hobbies that included amateur radio and model ship building. He was a member of the Seven Seas Club.

I am sure there are members who may remember this great man. Not many people served in four uniforms! His contribution to his country will not be forgotten.

Dennis became a silent key on 16 May, 2011, aged 90.

Some of you may have served with Dennis or worked him on the air. Check your logs. He was a keen CW operator. Look for G3AIS, ZB1AIS, VP8AIS, VK3DIS and VK5LS. I would be delighted to hear from you to complete the picture of this brilliant man.

Contributed by David A Pilley
VK2AYD
dvdply@midcoast.com.au



Building an 80 metre magnetic loop antenna for your attic

Jim Tregellas VK5JST



Photo 1: Testing the loop on a temporary frame.

Part 2

The practical antenna

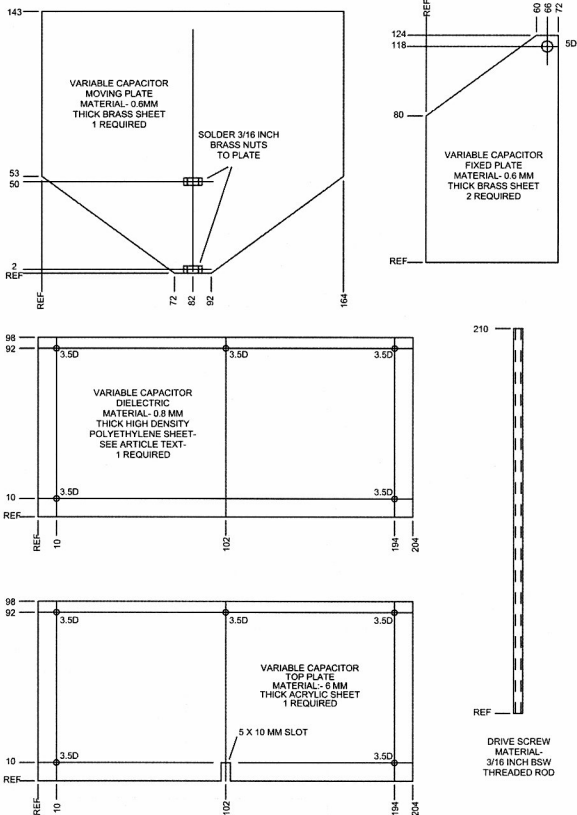
I settled on a loop with a perimeter of 0.1 wavelengths or 8.3 metres (2.6 metres diameter) after a careful look at my attic. Some calculation (see the website of KI6GD for the file loopcalc.zip) with an assumed loop conductor diameter of 18 mm

(copper water pipe) showed that I would need a tuning capacitor of around 280 pF to tune the loop down to 3.5 MHz and this capacitor would have to withstand around 4000 volts and several tens of amps. If the loop was operating with the predicted 18 to 20% efficiency, it would exhibit a Q on transmit of about 880.

Next step was to price the

loop conductor. I went to my local plumbing supplier and priced 8.5 metres of 18 mm diameter copper pipe. The figure quoted caused a rapid rethink. I checked the price of LDF4-50 and it was the same as the water pipe. LDF5-50 was not even funny. So back to the drawing board. At this point I was anything but sure that an antenna with a calculated efficiency of 20% was even worth having, and so I wanted a cost free method to prove the concept. After looking around under some benches I found enough short lengths of RG213 to make up three parallel turns of conductor. This was equivalent to having a single turn of a conductor with a diameter of 27 mm - which would have higher than normal losses due to the rough surface of the coax outer sheaths. I also had several Jennings vacuum variable capacitors which would fit requirements, and using one of these I made up my first loop. The results were very encouraging. The loop Q was around 1100, which clearly demonstrated that the coax losses were not as bad as first thought. I then removed one strand of the RG213 and the loop Q dropped to 810. So far, so good.

The next step was to get rid of the very expensive vacuum variable capacitor and simultaneously make the tuning less critical. This took about two weeks of fooling about. What finally evolved was a fixed 240 pF air spaced capacitor with super low losses in parallel with a 50 pF trimmer capacitor to allow tuning across the band. This structure rivals the vacuum variable in performance. The trimmer uses HDPE as the dielectric which keeps it physically small. It is driven via a screw thread from a low power stepper motor, and because the trimmer is only a small part of the total capacitance and the screw thread is fine, tuning is easy.

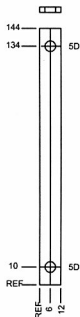


VARIABLE CAPACITOR DETAILS

DRAWN VK5JST MAY 2010

Figure 1: The variable capacitor.

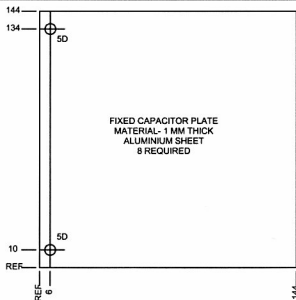
FIXED CAPACITOR
SPACER
MATERIAL- 12 X 3 MM
ALUMINIUM FLAT
2 REQUIRED



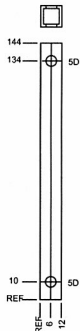
FIXED CAPACITOR
SCREW COLUMN
MATERIAL-
3/16 INCH BSW
THREADED ROD
4 REQUIRED



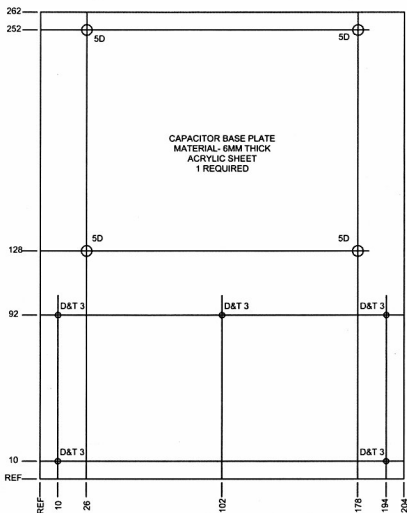
FIXED CAPACITOR PLATE
MATERIAL- 1 MM THICK
ALUMINIUM SHEET
8 REQUIRED



FIXED CAPACITOR
SPACER
MATERIAL- 12 MM
SQUARE ALUMINIUM
TUBE- 7 REQUIRED



CAPACITOR BASE PLATE
MATERIAL- 6MM THICK
ACRYLIC SHEET
1 REQUIRED



BASE PLATE AND FIXED CAPACITOR DETAILS

DRAWN VK5JST MAY 2010

Figure 2: The fixed capacitor.

It is a modified butterfly capacitor where the two fixed plates are positioned side by side on an acrylic backing sheet and a moving plate slides over the pair coupling them together. Finding the dielectric was not easy. After hunting around the local plastics suppliers, it became clear that the thinnest HDPE sheet they had was 3 mm thick. This is way too thick to make a trimmer capacitor of reasonable size. I nearly gave up at this point, but a shopping trip to Woolworths saved the day. There I found some kitchen cutting mats (Chef Craft Flexible Cutting Mats - pack of 4-305 x 380 mm - \$5) which were ideal, and even better, are a standard stock line. These mats are pure HDPE 0.8 mm thick. HDPE has a breakdown potential of 17 kV/mm minimum and so these mats can be used to make capacitors with 13,000 volt ratings (or 26000 volts in this case as there are two layers in series). HDPE has a dielectric constant of 2.2 but because one side of these mats is very finely patterned, the actual dielectric constant turns out at about 1.5 due to the small included layer of air. The trimmer ends up having two sets of plates with a working area of 72 x 80 mm spaced apart with 0.8 mm thick HDPE, making up two capacitors of around 100 pF maximum in series to form a 50 pF adjustable capacitor. The fixed plates are held in position side by side 20 mm apart with two of the retaining screws for the fixed plates. They are attached to the acrylic backing with standard double sided adhesive tape. Note that all brass plates in the variable capacitor must be very flat so that there are no significant air gaps in the assembly. The edges of all three plates must be carefully rounded and smoothed. The whole capacitor is held together with light spring pressure from springs on the shafts of five 25 mm long 3 mm diameter retaining screws. These screws pass through the top plate and dielectric separator to the backing plate and the springs bear down on the 6 mm thick top plate.

The fixed air spaced capacitor of around 240 pF is made with 1 mm thick aluminium plates spaced

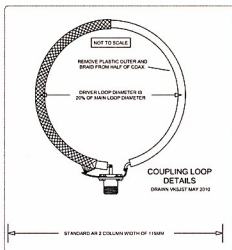


Figure 3: The coupling loop details.

apart using 12 mm square aluminium tube, giving a 5.5 mm interplate spacing. As air has a breakdown potential of around 3000 volts/mm this means that the fixed capacitor should work happily up to 11000 volts rms.

My final design is as follows.

The loop has a circumference of 8.3 metres and is made of two parallel turns of RG213 or RG8 outer sheath (do not remove the plastic outer insulation). Slightly better alternatives are one turn of 18 mm copper water pipe, or LDF4-50, or LDF5-50 if you want to spend the money or have it handy. These conductors can be attached to your internal roof structure in any reasonable shape which has a large internal area. This could be a circle, an octagon, or a square/rectangle/triangle with very rounded corners. Note that the antenna becomes more efficient as the perfect circular shape is approached and as the perimeter is increased. With a perimeter of 8.3 metres, the efficiency is around 20%. Even an antenna this small can compete with and sometimes out perform the typical inefficient wire antenna mounted at 10 metres. If the perimeter can be increased to around 15 metres (0.2 wavelengths), the efficiency rises to some 60% and you will have a 'big signal' on 80 metres. If your loop perimeter is bigger than 8.3 metres then you must reduce the size of fixed and

variable capacitors. Plates are easily removed from the fixed capacitor to allow this (part plates can also be used) and the plate sizes of the trimmer capacitor are easy to scale down too.

Feeding the loop

There are a number of ways energy from the transmitter can be coupled into the main loop. These include transformer coupling, the gamma match, and single turn shielded and unshielded coupling loops of around 20% of the diameter of the main loop. I like the last two methods because they are

simplest to make and adjust. A single turn coupling loop, half of which is covered with a Faraday shield to limit noise pickup, is easily made from a length of RG213 - refer Photo 1. When properly set up, the SWR of the antenna can be easily adjusted by flattening or stretching the circular shape of the coupling loop. An alternative technique is to slightly overlap the main and coupling loops.

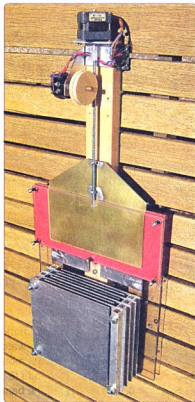


Photo 2: The tuning capacitor and feedback potentiometer assembly.

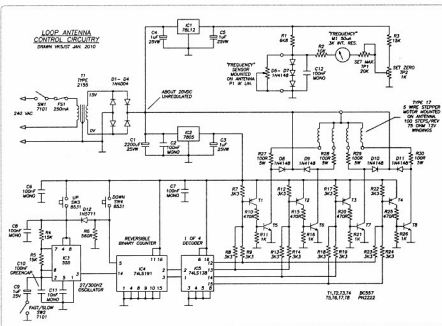


Figure 7: The copper pattern for the stepper control electronics.

thread from the moment it contacts the spinning tap in the drill. Make sure that the tap forces the worm wheel against the backing plate when cutting the thread! Clamp the backing plate to the drill table, and gently swing the drill table around the drill post to make cutting easy. If you use plastic, keep the tap cool

otherwise you will end up with no thread on the worm wheel, and a tap buried in melted plastic. I used a carbon pot with about 270 degrees of rotation and so I needed a worm wheel with about 75 teeth (75 revs from maximum to minimum capacitance) in around 240 degrees, or around 112 teeth



Photo 3: How to make a worm wheel in a drill press.

in 360 degrees. This gave a circumference of about 120 mm or a diameter of 38 mm. This worm wheel is fixed to the pot shaft with a blob of silicon sealant. The analog meter can be roughly calibrated in frequency terms using the two trimpots provided in the control unit.

And Finally.....

When you have mounted the antenna in your attic enclose the entire capacitor assembly in a plastic bag to prevent dust ingress. If you want to mount it outside then put the capacitor assembly inside an upside down plastic bucket and take the loop conductors up into this to keep everything waterproof.

References

1. An Overview of the Underestimated Magnetic Loop HF Antenna. Leigh Turner VK5KLT, AR May 2009.
2. ARRL Antenna Handbook.
3. Discussions and emails with Leigh Turner VK5KLT.

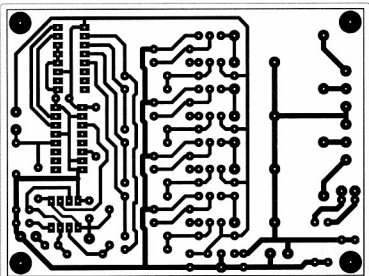


Figure 6: The control electronics circuit diagram.

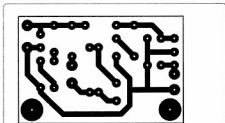


Figure 5: The pattern for the meter PCB.

Six months on Willis Island

David Burton VK4DAV/ VK9WBM

Most DXpeditions are undertaken by teams of experienced operators with months of planning before departure. They result in many thousands of contacts, and thus are normally considered successful. My trip to Willis Island was not like this.

I will start with a bit about myself. Twenty years ago I was a professional radio operator in Africa, working mainly for UN agencies like the World Health Organisation where I gained experience in field operations. I had enough interest in amateur radio to pass the British CGLI test but returned home before getting a licence. About twenty years passed until things changed.

In mid September 2009 an email arrived in my work mailbox at the Cairns Weather Office; it was almost a begging letter asking for someone please to fill the vacant officer-in-charge position on Willis Island for six months beginning in the coming November. I printed it out to discuss it with my wife but I did not expect the reaction I got. With a three year old son and a six month old daughter, I expected a flat rejection of the idea of me disappearing for six months to a desert island without her. Instead



Photo 2: Willis Island. It is about 125 metres by 400 metres of coral rubble with a reef around it.

she said 'Great, my brother is getting married in December, we will go to Tashkent while you go to the island'. I applied for the post on the Friday and was told I was successful by Monday lunchtime; it helps to be the only applicant! Then started a mad rush to

get tickets and visas for our children, pack our possessions for storage and for me to get a licence for operating from Willis Island.

As Willis Island (refer to Photo 4) is a rare DX location, I contacted John VK4JKL at the Cairns club who arranged for me to take the Advanced test and helped with supplying me with the addresses of web sites for practice tests. On 4 October I took and passed the test; it seems that there are some things you just do not forget, even with a twenty year break.

Dale VK4DMC offered to be my QSL manager, a task which he has done superbly and John VK4TL offered the loan of a HF/6 m rig and a two element 6 metre quad, which I gladly accepted. The other equipment I had consisted of some 300 ohm ribbon, a couple of reels of 7/0.2 wire, connectors, an old 12 V PSU and an Icom IC-718 with AH4 ATU which I picked up from Barry Dionysus' shop in Townsville just hours before setting sail.



Photo 1: Dave VK9WBM with the station equipment.

The only other preparation I made was to get a licence for the island. I applied for and got VK9WBM for eight months. A few people even managed to work it!

The first week after arrival on the island is spent with maintenance since we had specialists come out with us to fix things like plumbing and similar. They returned with the crew we were replacing. No radio got done then, but I did manage to grab a six metre long stainless steel pole for use as a mast before it got loaded onto the boat heading back to the mainland.

When things settled down and the four of us who were to run the weather station for the next six months were on our own I climbed the RADAR tower and strung a longwire from just below the top, at about 8 metres AGL and 16 metres ASL; this was the highest point on the island. The plan was to put the mast up in the clear and have a sloping longwire or G5RV to the pole. Things did not go according to plan.

Willis Island is a pile of coral rubble only staying in place because of the surrounding reef and the roots of the fringing bushes. If you think of those piles of gravel you see by the side of the road then you have an idea of the structural strength of the 'soil'. I hammered in three star posts until a quarter of a metre was left out of the ground, using the correct sloping technique and raised the pole. As soon as any tension was applied two of the posts pulled free. I extracted the remaining one with one hand!

So, no guyed masts! I tied the mast to a drain pipe and got the G5RV up about a metre above a metal roof. It sort of worked but not very well. I replaced it with a longwire inverted 'L' connected to the AH4 and got marginally better results (refer to Photo 3). On the ANZA net I worked my first stations and VK9WBM was in business.

A plastic pipe five metres long was liberated from stores with a three metre length of steel conduit for use as a stub mast and a six metre Slim Jim antenna was built using 300 ohm ribbon. The bottom

of the ribbon stuck out of the pipe but I put it up on another drainpipe using the conduit and immediately it worked! This was the best antenna I made in six months on the island (refer to Photo 3). Victoria, New South Wales and south east Queensland were worked when conditions allowed and I was not doing the work for which the Bureau was paying me.

As OIC I had to work as an observer as well as doing the paperwork, monitoring safety, stocktaking, writing operations reports and such things. I had less time for radio than I expected but I tried to operate at least once a week, more often if possible.

With no antenna rotor or mast for the six metre beam some ingenuity was going to be needed to get it into operation. Photo 1 shows what I ended up with. Supplies to the island are landed using a LARC or duck amphibious vehicle. There is a 'dock' for unloading and some time in the past a flagpole had been erected next to this. Unfortunately the pulley rope had broken and there was no ladder long enough to make a repair as the pole could not be lowered. Another pole was at the other end of the dock for no apparent reason and this three metre high mast had to do for me. I put the beam on a stub mast and dropped it into the hollow pipe

with string intended for tying RADAR reflectors to our weather balloons tied to the bottom ends of the driven element and two slabs of coral as anchors and I had a rotatable beam. To turn it I had to move the coral blocks but that was not too hard (refer to Photo 4).

Operation was by using an extension cable from the refrigerator compressor enclosure to my PSU and then into the Alinco DX70. I had to sit on hot concrete to operate and get sunburn at the same time. When the Slim Jim, which terminated in my bedroom (refer to Photo 1) showed that the Sporadic E was switched on I hastily dismantled everything and headed out to the beam. The result surprised me. This simple and rather crude system was able to work most states with good to excellent reports.

I had stated I was not available for planned skeds but simple good manners meant I had to try to set up contacts with VK4DMC, my QSL manager, and VK4TL whose rig I was using. Dale proved to be fairly easy and was the first north Queensland station I worked. For some reason I could not find any time of day that gave me a suitable skip to work the nearest part of the mainland. Working John was far more difficult. We got together with Dale setting up the time and frequency but John gave a signal which was strong but

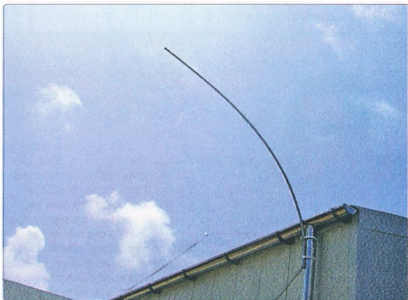


Photo 3: The six metre Slim Jim and part of the HF longwire in the background.



Photo 4: The six metre beam with the unique coral block rotator system. The dish in the background is for digital satcomms.

totally unreadable. A very unusual QSB effect was apparent with deep fading at about 2 Hz cutting up his audio. QSB is normally due to multipath propagation so I swung the beam fifteen degrees away from him and lost one of the signal paths. The QSB was cured but I now had a station six hundred kilometres away in Queensland being drowned out by stations the other side of the continent in Perth!

With several requests to wait as they could not hear me in contact with John we eventually made the required exchanges after 15 minutes of hard effort. I spent the next half hour getting 59 contacts with VK6 until I had to close to prepare the balloon for the early afternoon flight. In the next three hours while I was busy working the band died. I could raise no one when I tried again at about 0700 UTC.

This was the last significant six metre operation I was able to do. The first problem was with the Slim Jim. The local bird life had chosen it for a perch and the PVC pipe was not up to it. For those who have not lived on an island I had better introduce the Booby Bird. Think of a seagull and multiply by four. You now have four to six kilograms of bird wanting somewhere to roost for the night. To begin with the SJ took on a slanted polarisation which did not affect the

signal, when the slope passed beyond the horizontal the antenna began to blow into the building and I had to run around at midnight in a rising gale taking it down.

This gale was the start of the cyclone season. With TC Olga threatening to hit the island I took down the beam as well. It may have survived but it was a borrowed antenna and I was not going to take risks. The HF antenna was left in place as a bit of wire could not do much damage and was easily replaced. TC Olga hit us squarely with the eye passing right over the island. Most of the damage was from wind-blown salt spray corroding everything in sight – balloon filling equipment, generator switchgear and such things. With work-arounds for the problems in place during the working day I had no time to put any antenna back up.

With the HF and fed longwire still in place I tried to get back on the air and found I had made a stupid mistake. The AH4 was outside my room window, half under the raised building. I had had to mount it on the side to fit the space, with the coax feed going out the slightly open window and into one side of the ATU, the long wire coming out the other side. When the rain and salt spray hit the coax it drained down into the ATU. Not knowing this I tried to tune the antenna and it would not stop tuning.

Investigations soon found that the ATU box was a third full of water with the CPU submerged. It was a write off.

I will stress the failure was entirely my own fault. The AH4 had worked well with several poor antennae to get some signal out even though the wire was under two metres above a steel roof, Icom is not to blame for the failure, indeed all the commercial equipment I had from both Icom and Alinco performed well in a poor operating environment. I would recommend them to anyone going on a light weight DXpedition.

With the failure of several bits of the weather station it was decided to send out an extra boat with spares. The seasonal storms caused several delays and allowed me to order an AT180 from Barry who was very helpful and had it delivered to Cairns for despatch to the island. I also got a reel of the heaviest wire I could find off the shelf in Cairns picked up by Phil, the Cairns technician with the hope it would act both as an antenna and a bird roost without falling down. In the mean time I had no ATU, no antenna and little time to spare.

These problems did not stop me trying to get something to work. I reasoned that a folded dipole would be best but how to feed the 300 ohm beast? I decided to use a Slim Jim like feeder with both ends of the ribbon going to the 20 metre dipole. It did not load up on any band and I gave up and went to bed. Next morning I thought of finding out if the dipole was the wrong length by comparing the VSWR at each end of the 20 metre band. I was amazed when it immediately had a VSWR of better than 1:1.5. I had done nothing since the night before when it had seemed to be greater than infinity!

I gave up and went for breakfast. I was greeted by Nick, our technician, commenting that my new antenna had not survived the night. If he had waited until I had a cup of coffee he may have got a more intelligent reply than 'UH'? Looking out I could see that Booby Birds had broken the antenna at the coupling point and it was now open circuit on the unfed side of the SJ type feeder.

Area	Contacts	Band
A35	1	HF
E51	2	HF
FK1	1	HF
JA1	2	HF
JA2	4	HF
JA3	1	HF
JA6	1	HF
JA7	1	HF
K6	1	HF
KH6	2	HF
KH7	1	HF
KHO	1	HF
N0	1	HF
N7	1	HF
P29	1	HF
VE7	1	HF
VK2	3	HF
VK3	3	HF
VK4	19	HF
VK5	2	HF
VK6	2	HF
VK7	3	HF
VK8	1	HF
W9	1	HF
ZL1	5	HF
ZL2	1	HF
ZL4	1	HF
TOTAL	63	HF

The next day the rest of the antenna broke so I was not able to test the 'new' antenna. Maybe one day I will make it again and publish details of an antenna jointly designed by me and a sea bird.

The replacement ATU and some very heavy duty wire finally arrived about six weeks before I was due

Area	Contacts	Band
VK1	1	6M
VK2	21	6M
VK3	8	6M
VK4	21	6M
VK5	6	6M
VK6	4	6M
VK7	2	6M
VK4/M	1	6M
VK5/P	1	6M
ZL3	3	6M
ZL4	1	6M
TOTAL	69	6M

to leave. With the impending end of the tour of duty the work load was too high to allow much in the way of radio. HF work on the ANZA net was all I could manage and even then few could hear me. With my weak signal I was often heartened by the effort of far better set up stations to make contact with me; often they eventually succeeded more due to their effort than mine.

During the times when I was able to coax a signal out I managed just over 60 contacts on both the HF and six metre bands. The majority of the HF contacts were on 20 metres. A few of the more interesting contacts were with stations with connections to Willis Island. Five years ago the station was closed for a year to be totally rebuilt. At that time the permanently established amateur radio station was dismantled and the parts, which belonged to the Bureau, sold at auction. I worked one Victorian station on six metres

who was using one of the old masts bought at that auction and another who had the old HF transmitter. I also worked several stations with operators who had been to the island, one who had worked there long ago and some who had visited for a DXpedition a few years ago.

The summary tables are showing the contacts I made. I actually worked more contacts than is shown as I have deleted duplicates.

With the experience behind me I have to say it was a trying but enjoyable experience. I would offer this advice to anyone doing anything similar, whether on an island or inland – carry plenty of spares and try everything out before you go to an isolated area. I do not expect to return to Willis Island but if I did I would bring light weight masts to about eight metres high with broad angle iron posts for stays, a rotator and a commercially made trapped dipole for HF plus a spare HF antenna of a different design, spare ATU and plenty of spare coax.

Where to next? I do not know, but working for the Bureau of Meteorology makes remote area work postings always a possibility. We have weather stations on islands like Norfolk, Lord Howe, Macquarie and Cocos, as well as in Antarctica. Perhaps I will be VK9xxx again some time soon; if I am then I will be better prepared this time and hopefully work more stations. Keep listening out for me.



WIA Contest Website

To keep up to date with all of the major Australian contests, including rules and results, at the

WIA Contest Website at:

www.wia.org.au/members/contests/about

AMSAT

David Giles VK5DG
vk5dg@amsat.org

All you need is cash

This month is an update on two satellite missions nearing completion and focussing on their greatest financial challenge. Also, there is a new satellite on the way from AMSAT-India.

Kiwisat

After a decade of hard work Kiwisat is nearly finished. All the hardware has been finished to flight ready standard. The final stage of putting everything in place will be done just prior to launch. The software is still in development and will probably be worked on until it's ready to be boxed up for delivery to the launch pad. Which brings us to the last big hurdle: raising the launch funds. Kiwisat is a microsat sized satellite similar to AO-51 and has a mass around 10 kg. Getting a satellite of this size into orbit costs around the order of \$1 million.

AMSAT-ZL is negotiating a launch with ISC Kosmotras on one of their DNEPR rockets. These rockets are decommissioned SS-18 inter-continental ballistic missiles (ICBM) and will replace their nuclear warheads for low Earth orbit satellites – turning swords into ploughshares. ISC Kosmotras are scheduling their next DNEPR launch in 2013 [1]. So far seven OSCAR microsat class satellites (UO-36, SO-41, SO-42, MO-46, AO-49, SO-50, and AO-51) and several cubesats (CO-55, CO-57 among others) have been launched using DNEPR rockets.

Kiwisat is going to be a versatile satellite. It will have both linear and FM transponders using 70 cm and 23 cm uplinks and 2 m downlinks. There will be beacons on 2 m and 70 cm. Kiwisat will have a science package that is for attitude determination and control. Using a GPS receiver, Earth/horizon sensor, Sun sensors, and a 3-axis magnetometer to measure the Earth's magnetic field, Kiwisat

will be able to determine which way it is pointing and moving. It also has three coils to interact with Earth's magnetic field to point it in the desired direction. No permanent magnets will be on-board. Systems like this have been used on the high Earth orbit satellites before. Kiwisat also has a CMOS colour camera similar to the one used on CO-57 to verify the attitude system is working.

The only part of Kiwisat that has me wondering is the 70 cm beacon. It is designed to be used as a propagation tool to measure Faraday rotation and total electron count. History has shown that putting a transmitter on the same band as the command and control receiver can cause a few problems. UO-9 was out of control for six months when a software fault commanded on both beacon transmitters for 2 m and 70 cm. These beacons densified both of the command receivers and it took a 46 m dish and at least 12 Megawatts ERP to get through to the 70 cm receiver and turn them off. Kiwisat's beacon is only 100 mW compared to UO-9's 650 mW and hopefully has better frequency separation, just in case [2]. More details at their website [3].

P3E

If someone offered AMSAT enough to launch one high Earth orbit satellite or ten low Earth orbit satellites then it would be a fair bet that the former would be selected. Even if the LEOs had similar or better specifications they just cannot compete with the ability to reach a whole hemisphere for hours at a time.

Peter Guelzow DB2OS sent details of a presentation given to the AMSAT-DL symposium earlier this year. The presentation was on the current status of the P3E high Earth orbit satellite.

All the mechanical work has been completed for some time. IHU-3 is the computer that controls it all and

has been completed. An updated version, IHU-4, is currently under construction.

To fly the 150 kg P3E to a Geostationary Transfer Orbit (GTO) at commercial rates would cost in the order of \$13 million (2010 price) on an Ariane-5 rocket. Other alternative launches were discussed. Hitching a ride to a medium Earth orbit (around 20000 km high) with the Galileo constellation satellites was not an option as there is very little spare launch mass to play with. Similarly with a Soyuz rocket, there is not the spare mass, or available launches planned. AMSAT-DL has also been in negotiations with private space firms such as SpaceX as well as national operators.

Since its inception P3E has been proposed as a test bed for AMSAT-DL's ambitious P5A mission to Mars. P5A will be an AO-40 size spacecraft with a mass around 500 kg. The symposium presentation did come up with an alternative plan of sending it around the Moon instead. Despite raising membership fees and plenty of donations, AMSAT-DL is well short of the amount needed to launch P3E.

They are ready in other areas though. AMSAT-DL has a 20 m dish at Bochum in Germany for their use. They have previously demonstrated its abilities by receiving signals from Voyager-1 in 2006 and bouncing 2.4 GHz signal off the planet Venus in 2009. This year they hooked the dish up via an 8.4 GHz to 1280 MHz converter to a Funcube dongle receiver on a laptop and received signals from the Stereo B spacecraft. Stereo B follows the Earth in its orbit around the Sun and was 219 million km away with signals taking 12 minutes to reach the Earth [4, 5]. James Miller G3RUH has an article detailing the permanent configuration they have been using for decoding both of the Stereo spacecraft since 2010. Instead of the dongle and laptop they use an AR5000

receiver with a specially designed demodulator to feed a computer to decode the telemetry. This all came about from an invitation from NASA and NOAA to download space weather data [6].

AMSAT-India

AMSAT India is currently constructing their second satellite. This time it is a cubesat with a simplex digital transponder in the 70 cm band. The uplink and downlink will be on the same frequency. The transponder is designed for 1k2 to 9k6 operation with a transmit power of one watt. It also has its own CW beacon when

idling between packets. At this stage two transponders have been constructed and are being tested [7].

Final Pass

After some years without any substantial news it's good that P3E is still 'alive'. But without some large donations both of these satellites are staying earthbound. 'Buddy can you spare ten million?'

References

Idle, Eric, "All you need is cash" (or "The Rutles")

[1] <http://www.kosmotras.ru/en/>

[2] "UoSAT is back" AMSAT satellite report #42, 22 Sep 1982

[3] <http://www.kiwisat.org.nz/index.html>

[4] http://www.southgatearc.org/news/may2011/funcube_dongle_distance_record.htm

[5] <http://stereo.gsfc.nasa.gov/>

[6] <http://www.amsat.org/amsat/articles/g3ruh/127.html>

[7] <http://www.amsatindia.org/Newsletter/>



AMSAT-VK

AMSAT Co-ordinator

Paul Paradigm VK2TXX

email coordinator@amsat-vk.org

Group Moderator

Judy Williams VK2TJU

email secretary@amsat-vk.org

Website

www.amsat-vk.org

Group site:

group.amsat-vk.org

About AMSAT-VK

AMSAT-VK is a group of Australian amateur radio operators who share a common interest in building, launching and communicating with each other through non-commercial Amateur Radio satellites. Many of our members also have an interest in other space based communications, including listening to and communicating with the International Space Station,

Earth-Moon-Earth (EME), monitoring weather (WX) satellites and other spacecraft. AMSAT-VK is the primary point of contact for those interested in becoming involved in amateur radio satellite operations. If you are interested in learning more about satellite operations or just wish to become a member of AMSAT-Australia, please see our website.

AMSAT-VK monthly net Australian National Satellite net

The net takes place on the second Tuesday of each month at 8.30 pm eastern time, that is 0930 Z or 1030 Z depending on daylight saving. The AMSAT-VK net has been running for many years with the aim of allowing amateur radio operators who are operating or have an interest in working in the satellite mode, to make contact with others in order to share their experiences and to catch up on pertinent news. The format also facilitates other aspects like making 'skeds' and for a general 'off-bird' chat. In addition to the EchoLink conference, the net will also be available via RF on the following repeaters and links.

In New South Wales

VK2RMP Maddens Plains repeater: 146.850

MHz

VK2RIS Saddleback repeater: 146.975 MHz

VK2RBT Mt Boyne Repeater on 146.675 MHz

In Queensland

VK4RIL Laidley repeater on 147.700 MHz

VK4RRC Redcliffe 146.925 MHz IRLP node

6404, EchoLink node 44668

In South Australia

VK5TRM, Loxton on 147.125 MHz

VK5RSC, Mt Terrible on 439.825 MHz IRLP

node 6278, EchoLink node 399996

In Tasmania

VK7RTV Gawler 6 m. Repeater 53.775 MHz

IRLP node 6124

VK7RTV Gawler 2 m. Repeater 146.775

MHz. IRLP node 6616

In the Northern Territory

VK8MA Katherine 146.700 MHz FM

Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT-NA or VK3JED conferences. The net is also available via IRLP reflector number 9558. We are keen to have the net carried by other EchoLink or IRLP enabled repeaters and links in order to improve coverage. If you are interested in carrying our net on your system, please contact Paul via email. Frequencies and nodes can change without much notice. Details are put on the AMSAT-VK group site.

Become involved

Amateur satellite operating is one of the most interesting and rewarding modes in our hobby. The birds are relatively easy to access and require very little hardware investment to get started. You can gain access to the FM 'repeaters in the sky' with just a dual band handheld operating on 2 m and 70 cm. These easy-to-use and popular FM satellites will give hams national communications and handheld access into New Zealand at various times through the day and night. Should you wish to join AMSAT-VK, details are available on the web site or sign-up at our group site as above. Membership is free and you will be made very welcome.

The Elizabeth Amateur Radio Club

has secured a display booth at the *Science Alive! Event*, being held for Science Week at the Adelaide Show Grounds – **Friday 5 to Sunday 7, August.**

We are looking for range of hands on and interactive radio and communication displays for the event which present our hobby to the public in an interesting and engaging manner.

Displays at last year's event included: stations for sending and receiving Morse, two stations for radio communications using SSB, the Project Horus weather balloon and payload, a 'bionic ear' (parabolic dish) and voice communications via IR LED modulation.

If interested, or would like more information, please contact Paul Schulz [VK5FPAW@wia.org.au]

"Ham Nation". This show is hosted by Bob Heil K9EID of Heil Sounds and is also available as a download from the Spectrum website. It can be heard on the VK7RTV 146.775 MHz repeaters on Friday nights at 8:00 pm local time and Saturday mornings at 11:00 am local time. Tony also streams a broad range of the broadcasts that he hosts and links are available at: <http://www.vk7ax.id.au/spectrum/>

Radio and Electronics Association of Southern Tasmania

REAST's June presentation was from Patrick Burns VK7FPJB who is undertaking his Computer Science PhD project and is sponsored by the CSIRO. Patrick is researching how to use technology to be more physically



Photo 1: Patrick VK7FPJB, shown demonstrating his ambient interactive wrist band and clock.



Photo 2: 80 metre voice powered CW transmitter built by the author.

active. He took the attendees through what is currently available like the Wii, Pokewalker, gaming interfaces, persuasive computing and ambient displays. Patrick then took us through the development and use of his creation called ActivMON or the wearable Ambient Activity Display which is the size of a large wrist watch and has accelerometers, Bluetooth and an ultra low power microcomputer with a lithium ion thin film battery. This was a fascinating presentation, thanks Patrick and we look forward to hearing about how it progresses over the coming years. The presentation was videoed and has been placed into the DATV video library.

Our DATV Experimenter's nights have been well attended and we

have had a host of activities and guests who have featured on digital amateur television around Hobart. We have a new video mixer that has enabled us to do chroma-keying behind the presenters and has seen many interesting effects during our presentations. We had a talk from Peter VK7KPC on his work with Air Services Australia and Brian VK7NHJ who is involved with the Tasmanian Woodcraft Guild and his fascinating "other hobby". One show and tell segment involved the demonstration of a design by Michael Rainey AA1TJ for a voice powered 80 metre CW transmitter which was built by the author. This design was featured in the CW Operators QRP Club magazine Lo-Key of September 2010. A lot of fun was had by all when we connected it to the clubroom's dipole and received signal reports from all over Hobart. Interested? Why not come along on a Wednesday night from 7:30 pm and see what we get up to – you never know you might end up behind the camera or driving the mixing desk.

AR



Shepparton and District Amateur Radio Club

P.O.Box. 692 Shepparton3630

HAMFEST 2011

Sunday 11th SEPTEMBER

Venue: St. Augustines Hall Orr St. Shepparton
Vic Roads Directory. Map 273 Ref. M8

Entry Only \$5.00.

Doors open to Traders
at 8 am.

Public at 10 am.

Tables Available
\$10.00 each.

First class catering

Entry Ticket includes Door Prize Raffle

Sales New: Importers and Suppliers Of Amateur Equipment/Accessories

USED. Preloved Ham Gear and Accessories

All inside undercover

Table bookings. Alan VK3AO.

Email alan.ransley@bigpond.com

President Ed. Email vk3bg@wia.org.au

VHF/UHF - An Expanding World

David Smith VK3HZ
vk3hz@wia.org.au

Weak Signal

An old friend of mine recently became active again after a long absence from amateur radio. He was first licensed in the mid 70s and became a keen VHF SSB operator when crystal-locked AM operation was in its last days. Then family and work took away any spare time and radio was pushed to one side. With recent semi-retirement, he has regained his old callsign, borrowed an old 2 metre rig and set up a Yagi.

When speaking to him recently he asked, "Where is everybody?" He had been calling and calling on the low end of 2 m without a great deal of response. He had also tried the FM part of the band, but beat a hasty retreat when he heard some of the goings-on up that end. I told him that there are people around, but you need to pick your time – time of day, time of week and time of the year!

There is no doubt that now is a quiet time of year. A number of the more active stations have either taken holidays in warmer climes or pulled their towers down to work on antennas in preparation for next summer. It is also hard to be attracted to the dark depths of the cold shack when the option is to sit in front of the warm fire/central heating wasting brain cells on what little the TV offers or surfing the web. Hmm, it is a toss-up really!

However, the pressure is on from commercial users of RF spectrum and there is a great risk of us losing out substantially here – as has already happened with the lowest 10 MHz of the 70 cm band. The authorities do not care that there is little activity right now due to the lack of extended propagation. If they monitor a valuable slab of spectrum like the 2 m or 70 cm bands and find virtually no activity, then they will obviously be very receptive to applications for other uses of that spectrum.

So, we need to generate some activity. And activity begets activity. How many times have I

previously heard people questioning the usefulness of a 2 m SSB rig/horizontal Yagi, on the basis that there is no one there to work? But, there is!

So what regular activity is there currently? Well, the morning Aircraft Enhancement net would probably be one of the busiest times on 2 m at the moment – although even that can be fairly quiet. Most activity centres on 144.2 between 8 am and 9 am. It is relatively easy to work from Melbourne into Canberra and beyond if the aircraft do the right thing. Jim VK3II is a regular on this, and often reports contacts into the Sydney area.

In VK3, Rob VK3MQ assisted by Mike VK3KH conducts a weekly net on Wednesday nights at 8.30 pm on 144.150. The net regularly attracts up to a dozen stations from around the state, and further afield if the conditions are there.

Then to reach those sitting in the warmth surfing the net, there is always the VK Logger – www.vklogger.com – which can be used to arrange contacts.

If you have a regular sked with another local station on, say, 80 m or 2 m FM, why not move down to the lower end of 2 m and liven up that end of the band a little. I hear there is a much nicer breed of amateur on the low end of the band (I would add a "smiley" here, but I do not think it would survive the printing process).

Anyway, as they say: Use it or lose it.

Not aircraft enhancement

Speaking of the Aircraft Enhancement net, Jim VK3II reports on conditions on Monday, 13 June when there was almost no air traffic due to a volcanic ash cloud over Victoria and Tasmania: *There were some QSOs to be made, but signals from the Canberra area were substantially down from usual strength and very fluttery, probably just scatter propagation. VK1BG, VK1KW and VK2DO were contacted mostly at R3 to R4, S1.*

Microwave Blog

Roy VK4ZQ has created a rather nice portable VHF/UHF/microwave set-up covering all bands from 6 m to 10 GHz. A description of it, as well as the history of its development, is well worth reading and can be found at: <http://vk4zq.wordpress.com/2011/06/21/amateur-radio-in-the-field/>



The VK4UH/p station operating on 24 GHz at Mount Glorious Old working to Alan VK3XPD/p4 at Maleny. L-R: John VK4YJV, Colin VK5DK and Kevin VK4UH. Photo by Kevin Johnston VK4UH.

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au

Digital DX Modes

Rex Moncur VK7MO

New national microwave digital records

Alan VK3XPD reports as follows that his trip north to VK4 and VK2 with Colin VK5DK has resulted in two new digital records:

The first was for 24 GHz digital mode where no previous record existed. This record was initially set at circa 9 km, then 39 km, 59 km, 76 km and, finally, 153 km. A subsequent attempt over a longer path later in the day failed due to poor propagation.

Using WSJT, our 153 km record distance on 24,048.1 MHz was set with "huge rock crushing" signals from McCarthy's Lookout near Maleny to Beachmont, inland SSW of the Gold Coast. Colin VK5DK, with John Maudsley VK4YJV assisting, were at the Beachmont site and Alan VK3XPD was at the McCarthy Lookout site.

The next digital record we extended was for the 3.4 GHz band. This is now 162 km. Using WSJT, on 3400.1 MHz we had solid signals from Mt Coramba, NE of Coffs Harbour, NSW down to North Brother, a high point a few km south of Port Macquarie. Colin VK5DK and Alan VK3XPD, with two full sets of microwave gear covering 1296 MHz thru to 24 GHz, operated from Mt Coramba. At the distant end of the path was Mark VK2AMS with his newly completed 3.4 GHz gear. Also on site was Neil VK2EI with his microwave transverters, with Ross VK2DVZ assisting. This QSO record took about 40 minutes to complete. Mark being a newbie to both microwaves and WSJT had a few teething problems but with both Ross and Neil assisting with the finer points of WSJT operations, we were finally successful. After completing with Mark, Colin and I rapidly repeated this digital QSO to Neil using his equipment.

Congratulations to all who were involved.

FSK activity sessions on 144 MHz

Welcome to Arie VK3AMZ who puts out an excellent signal and is regularly working into VK4. David VK4SKY, Phil VK4CDI and Robert VK4LHD have been holding up the VK4 end in the absence of John VK4JMC. Rhett VK3VHF and Waldis VK1WJ are regularly working Bob ZL3TY and Rhett has copied Peter ZL4LV over the mountains into Dunedin.

Arietids meteor shower

Adrian VK4OX has been running tests during the Arietids meteor shower which peaked from around 6 to 10 June, from about 0000 UTC to 0200 UTC. These have produced excellent results with very quick contacts to VK3HY, VK3II and VK3AMZ using FSK441 in 15 second periods. There was no evidence of enhanced pings as far south as VK7 which may be explained by the fact that the Arietids are well to the north. Adrian reports: *the Arietids meteor shower has been very good since about the 6th of June. OH5IY Predictor program has been very good too, predicting the optimum time for VK4 to VK3. OH5IY also comments that this shower is full of small partials and from what I have observed that has been spot on... hardly a 10 second burn in over a week but many, many one to five second burns which are no good for SSB but ideal for FSK441.*

Please send any Digital DX Modes reports to Rex VK7MO at rmoncur@bigpond.net.au

The Magic Band – 6 m DX

Brian Cleland VK5BC

June provided many good winter Sporadic E openings, probably the best winter E season for some years, particularly down the east coast.

1 June Rob VK1KW worked John VK4FNQ in Charters Towers and then on the 2nd Joe VK7JG and Frank VK7DX worked several VK4s. Then,

on the 4th, the band opened between ZL and VK2, 3 and 4.

On 5 June the band opened for some hours between VK2, 3, 4, 5 and 7. Phil VK4FIL in Brisbane reported working VK3DUT, VK3KH, VK2ADR, VK7DX, VK3FZ, VK5GF and David VK5AYD in Coober Pedy with most signals around 5/9. Again on the 6th the band opened all down the east coast and to VK5 and ZL. Garry VK5ZK reported working VK4FIL, VK4EK and Mark ZL2WHO. Also Andy VK6OX reported hearing the VK5RBV beacon but no contacts. On the 7th Garry VK5ZK again worked VK4FIL and Rod ZL3NW worked several VK2s.

On the 8th, northern VK4s worked VK2 and 3 with Brian VK4EK in Sapphire working southern VK4s and VK5ZK, ZL2WHO and Garry VK5ZK again working ZL2WHO. 9 June was a short opening, Wayne VK4WTN worked Rob VK1KW and Brian VK4DDC worked ZL50GH.

On 10 June the band opened for several hours between ZL3 and 4 and VK2, 3 and 7. Ross ZL3ADT worked Steve VK3ZAZ, Frank VK7DX and Norm VK3DUT. Peter ZL4LV worked VK3DUT and Brian VK2BX with Norm VK7AC working ZL3AAU. A short opening on the 11th when Frank VK7DX worked Glen VK4BG and Wayne VK4WTN worked Norm VK3DUT.

On 12 June Frank VK7DX worked several VK4s including VK4EK, VK4BG and VK4WTN and Quentin VK4AQF worked Peter VK5PJ and Daryl VK3ADR. In the evening Gary VK4ABW/8 in Darwin reported hearing several JA beacons and working BA4SI.

On 13 June Andrew VK3OE worked Keith VK5AKM and Rob VK1KW worked VK5ZPS during brief openings. The 14th saw the band again open for several hours with many contacts being completed. Phil VK4FIL reports working VK2BX, VK1DJA, VK1KW, VK2FAD and Mark VK2EMA (short skip 780 km). Same day Garry VK5ZK also worked VK1KW and Brian VK2BX.

Continued on page 46

Cradle Coast Amateur Radio Club activation of Table Cape Lighthouse AU0039 near Wynyard, Tasmania

Wayne Hays VK7FWAY and Eric Edwards VK7FEJE

On Friday Eric VK7FEJE picked up the key for the access road to the Table Cape Lighthouse as pre arranged with the Wynyard Council while Wayne VK7FWAY went ahead. The access road is normally locked after hours.

Just as Eric was leaving Wynyard, he received a call from Wayne stating that he could not get into the access road to the lighthouse to set up for the weekend. Eric made a quick turnaround back up to Wayne and found the road barricaded, with five huge bales of silage across the road, and the boom gate wrecked.

Eric made a trip back to the Wynyard Council Chambers and found a distraught civil celebrant in the office of the Engineering Department wanting to know why she could not get up to the lighthouse to perform a wedding on Saturday afternoon. The office staff were trying their best to explain that there had been some vandalism in the lighthouse area, and also that the Cradle Coast Amateur Radio Club, that is, Wayne and Eric, had first access to the area.

Eric received a phone call from Ashley, the Wynyard council engineer, and they decided to leave the lighthouse road blocked. Permission was granted to use the nearby Table Cape lookout car park that was about 800 metres from the lighthouse, providing there was enough room available for cars coming up to turn around. Ashley also notified the local police that Eric and Wayne had permission to operate their radio station and camp in the car park.

Eric also passed on that the wedding could go ahead in the car park and they would not interfere with the ceremony. With this information, Wayne proceeded to set up camp for the weekend with his work truck come radio shack, and some DXing was done on Friday

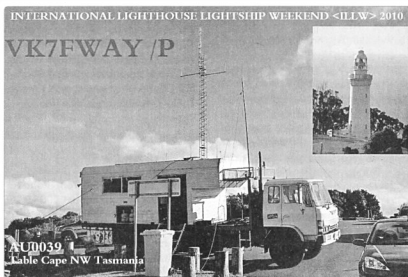


Photo 1: Table Cape Lighthouse AU0039, near Wynyard, Tasmania.

night, with Scott VK7FTTT assisting.

On Saturday a few visitors and club members turned up, including Steve VK7FWWF, Graeme VK7KT, Scott VK7FTTT, and most importantly Laurie VK7ZE, who came late in the afternoon to see if his generator was being put to good use. A lot of contacts were made between 11 am and 4 pm, at which time the generator was shut down for the wedding to proceed as planned. After the brief nuptial interruption the intrepid operators were quickly back on air.

The furthest lighthouse station that was worked was VO1SA in Cape Spear, Canada, along with several ZL lighthouses. Contacts included our Australian lighthouses from Cape York, around the eastern seaboard and including WA. Contact was also made with the lighthouse tender and supply vessel, Cape Don, at anchor in Sydney Harbour.

With the RD contest not clashing this year, and good band conditions during the time that they were at the Table Cape Lookout car park,

some 200 plus contacts were made up until early on Saturday evening when Wayne suffered a computer glitch and lost the log on his laptop computer. Luckily he was able to recover it very late on Sunday evening.

Scott VK7FTTT later returned from his nearby home with sandwiches which were really appreciated, and stayed until late Saturday night. That night, Wayne was working DX on 40 metres when he created a dog-pile unlike anything he had heard before on that band. At approximately midnight they ceased operations and shut down everything until 6 am Sunday.

Wayne had the luxury of his official chef, Karen, arriving late Saturday evening and she set about cooking up a storm of eggs, bacon, sausages and chops, what a feed for breakfast. They had the best radio spot on the north-west coast, with room service, as they started contacting other lighthouses and stations around Australia.

Winston VK7EM paid a visit on



Photo 2: Eric VK7FEJE and Wayne VK7FWAY inside the mobile shack.

Sunday morning, as did Ashley the council engineer, who informed the crew that they will be able to use the actual lighthouse structure next year for the lighthouse weekend. In previous years, ILLW operation had been conducted by Eric and Wayne while camped beside the lighthouse and having to use their own masts. The lighthouse is in the order of 15 metres high and will make a useful

antenna support. By the way, the Table Cape lighthouse is still operational and will soon be opened up to the public with access via privately run guided tours.

At midday the station was shut down and dismantled, and we both set off for home. Another great and successful weekend was had by all.

AP



Photo 3: Wayne VK7FWAY at the operating position at Table Cape lighthouse.



Photo 4: The front section of the mobile shack used at Table Cape lighthouse.

Contests

Phil Smeaton VK4BAA

Contest Calendar for August – October 2011

August	6	TARA Grid Dip	PSK/RTTY
	7	Waitakere (NZART) Sprint	CW
	6/7	10-10 International QSO Party	SSB
	13/14	Worked All Europe	CW
	13/14	Remembrance Day Contest	CW/SSB/FM
	27/28	ALARA Contest	CW/SSB
September	2/3	All Asian DX Contest	SSB
	2/3	Region 1 Field Day	SSB
	11/12	Worked All Europe DX Contest	SSB
	24/25	CQWW RTTY DX Contest	RTTY
October	1/2	Oceania DX Contest	SSB
	8/9	Oceania DX Contest	CW
	15/19	Worked All Germany Contest	CW/SSB
	29/30	CQWW DX Contest	SSB
	29/30	ARRL International EME Competition	CW/SSB
	29/30	CQWW SWL Challenge	SSB

Note: Always check contest dates prior to the contest as they are often subject to change.

Welcome to this month's Contest column.

Firstly, I need to document an apology. I managed to miss the VK Shires contest from the contest calendar. I hope this did not spoil your enjoyment of the contest – assuming that you knew it was on! The WIA website lists contests such as the VK Shires, so hopefully this omission did not curtail participation too much.

A whole bevy of contest results released this month. No further words needed from me – except to say that not a single VK5 entrant is in the list, which is a bit of a surprise as there are plenty of active testers in SA. Well, I *thought* there were anyway. Congratulations to all VK entrants!

2010 ARRL International DX Contest CW scores

VK2AYD 140,790; VK4TT 58,308; VK3IO 56,544; VK2DAG 11,826; VK3VT 10,578; VK2IM 350,280; VK7GN 166,380; VK4BUI 27,432; VK2GR 25,185; VK4TJF 9,396; VK3TDX 42,312; VK3TZ 5,952.

2010 ARRL International DX Contest Phone scores

VK4ATH 2,310; VK4HAM 22,152; VK2HBG 5,145; VK4XES 2,442; VK2VTH 1,914; VK6FDX 966; VK7AD 420; VK3IO 115,416; VK4GH 1,539; VK4EJ 28,659; VK4FJ 8,928; VK3NI 90,072; VK3VTH 2,166.

2010 IARU HF World Championships scores

VK4AN 26,158; VK4LX 5,720; VK4GH 17,507; VK4TT 17,056; VK4EMM 357,555; VK4XES 1,955; VK3TDX 456,048; VK7ZE 105,984; VK3IO 101,380; VK7AD 1,581; VK2WAY 324; VK3VTH 70; VK2GR 35,165; VK3FM 22,101; VK2PN 144; VK7GN 135,744.

2010 ARRL 10 Meter Contest scores

Z21DXI (VK6DXI, op) 177,848; VK4TJF 33,528; VK4FJ 12,880; VK4MON 168; VK4IU (VK4EMM, op) 424,780; VK3TDX 166,950; VK6FDX 1,710; VK4ATH 1,118; VK4LAT 37,026; VK4EJ 19,800; VK2HBG 1,440; VK3ZGP 4; VK6IR 10,974; VK3AVV 368; VK4SN 44,480; VK2BJ 16,308;

VK2PN 7,416; VK4TT 1,920; VK2IA 200; VK2RSG 256; VK3GK 780.

Norfolk Island

VK9NN (IK1PMR & N6TQS, ops) 42,168.

All Asian CW Contest

Steve VK3TDX was part time on the bands as a single operator all band high power entry, netting just over 300 QSOs and a claimed score of 66,552. Steve noticed that the average age of the operator is increasing as the years go by (the operator age is part of the exchange) but there was an 18 year old in there as well – just to bring the average down a little to 56.

Mirek VK6DXI was also in the melee, but suffered from a 'blue screen of death' computer problem that chose to hiccup during the contest. Mirek put just under 1,200 Qs into the log, with over half the tally gained on 10 m and 15 m, for a claimed score of 674,424.

John VK4EMM was in the contest as VK4CT, operating from a friend's QTH, putting his skills at SO2R to good use to grab just under 1,200 QSOs for a claimed score of 519,948, with a slightly more 20 m emphasis than Mirek. John reported that the 10 m band opened for only one hour on day one and that he heard nothing on 10 m on day two from VK4. Band conditions on 80 m were excellent; he just needed more Asian stations to work.

Allan VK2GR operated as P29CW from Papua New Guinea and had some fun in the contest, amassing 773 QSOs for a claimed score of 263,886. Fun was being had until the Sunday afternoon, when Allan was involved with managing a medical emergency in the Western Province, organising the communications and logistics for an international Medivac. The couple involved are now recovering in Cairns Base Hospital. Nice going Allan!

The Contesters Lament: 10 and 15 m – where for art thou?

The sun has graciously shown signs of life in recent months, but a new report from the U.S. National Solar Observatory raises the question of whether the next solar cycle might be even less active than many had been forecasting in recent years. In other words, it could bring on an extended period of solar inactivity - bad for the higher HF bands like 10 and 15 metres, but great news for the low bands on 80 and 160 metres.

A joint report issued by the NSO and the Air Force Research Laboratory found "that the next 11-year solar sunspot cycle, Cycle 25, will be greatly reduced or may not happen at all. But the fact that three completely different views of the Sun point in the same direction is a powerful indicator that the sunspot cycle may be going into hibernation." The results were announced this past week at a solar physics gathering of the American Astronomical Society in New Mexico - as phrases like "Maunder Minimum" were used by those with expertise about the sun. To be honest I had never heard of it before, but apparently the Maunder Minimum was a period between 1645 and 1715 where there were almost no sunspots. If that were to happen again for an extended period of time, it would certainly have a dramatic impact on amateur radio contesting, which recently saw a two year period where the low bands were intensely active, while contacts on the higher bands became a struggle and often leaving the higher bands unused. "This could be the last solar maximum we'll see for a few decades," said Dr. Hill. "That would affect everything from space exploration to Earth's climate." Amateur radio contesting might change a little, too!

Have you got wood?

Many an OM would be delighted with it and there are just as many YLs excited about the prospect, too. Happy is a contesteer who has wood - and the bigger the better.

I watched a recent 'lifestyle'

TV program the other day, called something like 'Better Homes than Yours'. A segment of the program concentrated on a 40 m tall tree that was engulfed with another plant creeping up it, which was damaging the tree. The experts were called and an interesting floor mounted catapult type of gadget for flinging rope over the tallest bows was utilised to establish a method of gaining access to the very top of the tree for the protagonists wishing to do battle with the offending foliage. An arborist swiftly climbed up to the top and proceeded to hack away at the offending growth. With the tree suitably stripped of its unwanted covering, the owners of the tree took a look at its newly shorn magnificence and proclaimed the work to be a success and completed to their satisfaction. To my mind the job was only half finished, as a 40 m high tree is crying-out for a halyard and pulley to be attached at the very top and a pull-rope for an antenna of some sort to be installed!

If you have got wood, I would recommend not being bashful and to use it fully and to your best advantage!

The Level Playing Field

One thing I find interesting about the recent spate of "Lets level the playing field" discussion that has been on the net is that every serious contesteer works hard to make sure it is *not* a level playing field. We try to gain the upper hand through better/higher/more antennas, beams and anything else we can buy or build that will "give us the edge we need" over the competition. Same thing in the shack - newer/better/quieter radios, magic boxes that we think will help that little bit - all in an effort to win. Certainly, geography plays a part, but so does operator skill, the ionosphere and a myriad of other variables - some under our control and others not. Add it all up, and even despite our best efforts - sometimes we don't or can't win a certain competition. Life's just not fair sometimes.

To state the obvious, by the laws of physics, the playing field

is *not* level. It is far too complex to ever be rendered level by any artificial means, for instance, by scoring adjustments. Any attempt to do so will undoubtedly result in somebody somewhere claiming reverse discrimination. For those of you clever souls with a mathematical aptitude (which I haven't) the problem is that there are too many independent variables.

If a contesteer feels that winning really is *that* important and feel that geography is preventing a winning entry, then maybe that contesteer should either:

- a) move;
- b) build a remote station;
- c) be a guest op;
- d) go on a DXpedition
- e) enter a less hotly contested category
- f) change the definition of winning - for example, you can decide that if you had the highest score in your category within 200 kilometres of your QTH, then you won.

But a word of warning - even if you choose to do one of the above, the playing field still will not be level. That is the nature of the game we are in - there is an element of skill, an element of good station engineering, an element of geography, and an element of luck. Many factors contribute to what we might categorise as luck, including ionospheric conditions, local storms, power outages, computer malfunctions, who spotted you versus spotting your competitor, how wide a signal does a neighbouring run station have, and so on.

If you really want to compete with a level playing field, or at least as level as it can get as a practical matter, then you need to get all the ops with whom you want to compete to submit their high scores on RUFZ or Morse Runner or other similar programs. Just make sure everybody has the same level of background noise in the room (or, better yet, everybody is in the same room), and everybody uses the same pair of headphones, and uses the same settings in the program, or else the playing field still won't be level.

What else to do? Well, we can give up, but that's too easy! A quitter can never win. From where I usually operate, I know that no matter what I do or how many antennas I install, there are certain contests that I cannot win. Instead, I choose to still get on, do my best and have fun. The bottom line is to compete on your own terms. Changing the rules to hobble the competition in order to "level the playing field" will not change that, and if it did, I am not sure I would want to 'win' that way.

ARRL contest rule changes?

Within recent weeks it is reported that the ARRL Contest Advisory Committee (CAC) voted 10 to 2 to recommend some form of distance based scoring system for the ARRL DX Contest. This is clearly a fundamental and radical proposition that will significantly impact contest results, both domestically and internationally, if ultimately approved. The precise way such a scoring methodology will be implemented is still under investigation by the CAC. Reportedly, they plan to back test various scoring algorithms to determine potential impact in comparison to prior results before getting more specific. Currently, the Stew Perry 160 contest is the only major international event that presently uses some form of distance based scoring.

There are several scoring algorithm choices, but regardless of which is selected, the impact

of distance based scoring will unavoidably result in a re-arranging of the order of finish for the top twenty or thirty competitors in all Single Op entry classes. It is likely that a change in scoring formula will delight certain US participants and produce a wail of protest from other US contesters, depending on where they live no doubt, but distance based scoring virtually assures victory to those operating from northern Africa in high sunspot years. It is unlikely that a Caribbean station will be able to overcome the distance/points per Q advantage with contact volume.

The CAC is also considering the question of operating time limits for single operator entries. A few options have been discussed and apparently as of this week, a movement to eliminate the existing 48 hour time limit for single op entrants has ended. But still on the table is consideration and possible creation of a new Single Op entry class based upon some shorter time frame. The CAC has discussed a number of options including 24, 36, 40 and 44 hours, but apparently a proposal for a 24 hour class has thus far seen little support from CAC members. The time limit could possibly make it no longer practical to watch for those short band openings. They just will not be productive enough for operators to worry about. The contest may change somewhat and become a 'run' type of contest – much like the WPX contest currently is.

The CAC is still in discussion and study mode on ARRL DX. They have had some preliminary votes, on various issues, to get a sense of where CAC members stand, but they have not come to any final conclusions and have made no recommendations to the ARRL Board committee with authority to change rules. So, it would appear that this is nothing more than a report of a discussion - there is no rule change planned, recommended, or pending.

US stations tend to have their antenna systems pointed towards EU to try and maximise rate, but a tweak in the rules to take into account distance might make VK and ZL stations more 'valuable' run QSOs as a result. Under the current rules, there really is no reason to concentrate on Pacific stations other than working a multiplier because the contest activity level is perceived by many stateside stations as poor or declining. It'll be interesting to see the outcome of these discussions over the coming months as Pacific stations may benefit greatly as a result.

If you have any contest related material for inclusion within the column, topics that you would like covered or even some experiences and pictures would like to share, then please feel free to get in touch via vk4baa@wia.org.au

See you on the bands.



VHF/UHF - An Expanding World

Continued from page 41

The band was quiet on the 15th but the VK5RBV beacon was reported by Andy VK6OX and John VK6JJ.

After a couple of quiet days the band came to life with good openings on 18 June, particularly from ZL to VK2 and 4. Scott VK4CZ worked several ZLs including ZL4DK, ZL4LV, ZL3MH and ZL3ADT. Kerry VK2BXT also reported working ZL3ADT and ZL3MH and hearing the FK8 beacon. The band again opened from ZL to VK2 and 4 on the 19th with John VK2BHO working several ZLs.

On the 20th during a short opening Jeff VK5GF worked Frank VK7DX and on the 21st another opening from VK4 to VK3 and 7 with Brian VK4EK working several stations and Phil VK4FIL working VK7DX and VK3YHT.

On 24 June there was a good opening from far north VK4 to southern VK4 with Dale VK4SIX in Atherton, Ross VK4RO in Ayr and Brian VK5BC/4 near Pt Douglas working several southern VK4s including VK4FIL, VK4WTN and VK4EK. On the 25th around the same

time (0500 UTC) Brian VK5BC/4 again worked VK4WTN and Glen VK4BG with 5/9 signals from the car using a 2 m 5/8 vertical.

In summary all states have had a good winter E's season with, unfortunately, only VK6 missing out.

I apologise for any missed information but I am presently holidaying in far northern VK4 and have had limited time to gather and collate info.

Please send any six metre information to Brian VK5BC at briancieland@bigpond.com



COQC QRP Day contest 2011 – Rules

Mike Gower VK2IG

Sponsored by the CW Operators' QRP Club (COQC) in Australia and open to all amateur radio operators, the QRP Day contest has the following objectives:

- To work as many stations as possible in each hour.
- To encourage contacts between VK, ZL and P29 stations.
- To encourage the use and enjoyment of low power equipment, whether commercial or home-brewed.
- To test the efficiency of your station under QRP operation, and
- To compete for a certificate for best hour and/or best three hours.

Scoring

- The final score is the sum of the individual points per QSO given in the Scoring Table below.
- No multipliers apply.
- QRP stations can count contacts with QRO stations towards their final score.

Logs

- Logs must show full details for each QSO, namely, time (UTC), station worked, band, mode, exchange serial sent, exchange serial received, and points claimed.
- Please use separate logs for CW, Phone or Mixed modes.
- Arrange logs so that each hour is clearly distinguishable.
- Logs should be submitted for "best three hours" and scores will be automatically considered for highest score for each separate hour.
- A Summary Sheet showing operator's callsign, name, address and points claimed must accompany the log.

Date/Time:	Saturday, 3 September, 2011, from 0800 UTC–1200 UTC. Entrants are encouraged to compete for all four hours and submit their logs on the basis of "best three hours"
Frequency Bands:	HF bands are 80, 40 and 20 metres. Please observe the band plans and only use your mode(s) of choice within the designated sub-band(s).
Category:	Single Operator only.
Modes:	CW, Phone, Mixed (CW and Phone).
Power:	Any station claiming to operate QRP MUST NOT exceed a maximum transmitter output power of five watts average power (CW) or five watts PEP, and should add /QRP after the callsign.
Exchange:	A three-digit serial number beginning at 001 and incrementing by one for each contact. Please note: RS(T) is not required, but if given should be an accurate statement of readability, signal strength and tone.
Repeat Contacts:	In order to make greater use of available band space and time, repeat contacts with the same station will be allowed once each hour of the contest on each mode, that is, a station may be worked each hour on CW and Phone.

Scoring Table	Your Call Area				
	VK	ZL	P29	DX	
Other Station's Call Area	VK	1 point	3 points	3 points	5 points
	ZL	3 points	1 point	3 points	5 points
	P29	3 points	3 points	1 point	5 points
	DX	5 points	5 points	5 points	-

- The preferred method of sending the log is email, but entrants must still include their postal address as per the Summary Sheet.
- Send logs and summary sheet to the Contest Manager, Mike Gower VK2IG, email: qrphours@exemail.com.au (the same address as used for the QRP Hours Contest), or via snail mail to Box 8013, Gundaroo, NSW, 2620.
- Emailed logs must be postmarked no later than 2359 AEST on Friday, 16 September, 2011, while snail mailed logs must be postmarked no later than Friday, 16 September, 2011.

- Feel free to include information about your station and band conditions, and any comments on what you liked, what you'd like to see included or improved, and so on.

Certificates

Will be awarded to the following:

- The first three (3) place-getters in each mode who submit "best three hours" entries, and
- The highest place-getter in each mode for the highest score in any individual hour.



ALARA Contest 2011

Saturday 27 August and Sunday 28 August

0400 to 1359 UTC both days.

Rules available at

<http://www.alara.org.au/>

Results: Harry Angel Sprint 2011

Ian Godsil VK3JS

Mixed

1st Place	VK4SN	Alan	78 points
2nd Place	VK4KY	Andy	66
3rd Place	VK4NP	Norm	57
4th Place	VK4WM	Wade	53
5th Place	VK4PL	Reg	26

Comments

Thank you all for your entries in the Harry Angel Sprint for 2011. It was most pleasing to receive a total of 35 logs (32 by email and three by postal mail). And I acknowledge that, as always, there were those who took part but did not submit a log.

I am very pleased to note that there were three entries in the Mixed Section, that is, a few of you had some CW contacts. (Those who know me will remember my passion for the CW mode). Also it was most heartening to see some new callsigns in the list and certainly one operator trying his hand for the first time. Congratulations Grahame VK4FAAB. It is not easy the first few times, but the old adage 'Practice makes Perfect' certainly applies here.

My apologies for any mix-up in dates this year. Things had not gone all that well for me, then Easter and ANZAC occurred at what should have been the normal time for the Sprint, so things got moved. Fortunately, you all caught up with that.

Sadly, this is the last time that I shall be managing this event, as my wife's state of health now takes up a lot of my time. I thank everyone who has supported the event during its 14 years' history and hope that all of you will continue to support the new manager. This will be the Redcliffe ARC and I thank them for offering to take on this task.

73 Ian Godsil VK3JS

Phone

1st Place	VK4UH	Kevin	76 points
2nd Place	VK4VDX	Roland	67
3rd Place	VK4KRX	Rik	66
	VK4QH	Ken	61
	VK4GH	Catherine	58
	VK4FJ	Warren	49
	VK4FY	Shaun	48
	VK7VH	Vince	44
	VK4HS	Wayne	41
	VK4KUS	Steve	40
	VK4AMG	George	36
	VK4XZ	Bill	36
	VK7JGD	Garry	30
	VK3ZPF	Peter	27
	VK4TAA	Reg	26
	VK4JRO	Ross	24
	VK2BOZ	Cris.	23
	VK4UD	Robert	21
	VK4MAX	Dan	21
	VK2VJA	John	21
	VK4SR	Graham	20
	VK2ACD	Chris.	20
	VK4ARW	Russell	20
	VK4BRG	Ronald	19
	VK4FDHS	David	18
	VK4YL	Jenny	18
	VK4YQ	John	16
	VK4JM	Rusty	15
	VK4AHR	Johann	13
	VK4FAAB	Grahame	12

Check Log

VK2PN Patrick



International Lighthouse/Lightship Weekend

20 - 21 August 2011

Foster appreciation of lighthouses and lightships by operating an amateur station at a lighthouse during the weekend and have fun contacting other amateurs around the world (propagation permitting).

Full details of this year's event and previous activity weekends can be found at <http://illw.net/>

WVLE

Gridsquare Standings at 17 June 2011

Guy Fletcher VK2KU

144 Mhz	Terrestrial	
VK2FLR	Mike	116
VK3NX	Charlie	107
VK2KU	Guy	102
VK3PF	Peter	90
VK3HZ	David	89
VK2ZT	Steve	82 SSB
VK5AKK	Phil	82 SSB
VK2ZAB	Gordon	78 SSB
VK2DVZ	Ross	77 SSB
VK3PY	Chas	77 SSB
VK3BDL	Mike	68 SSB
VK3II	Jim	66
VK3QM	David	66 SSB
VK2EI	Neil	65
VK7MO	Rex	65
VK3BJM	Barry	64 SSB
VK2AMS	Mark	63 SSB
VK2TK	John	62
VK3II	Jim	62 SSB
VK2MER	Kirk	61 SSB
VK4FNQ	John	59
VK3WRE	Ralph	58 SSB
VK4FNQ	John	58 SSB
VK3PF	Peter	56 SSB
VK5BC/p	Brian	55 SSB
VK5BC	Brian	53 SSB
VK3KH	Michael	51 SSB
VK3ZLS	Les	51 SSB
VK3HY	Gavin	49
VK4CDI	Phil	49
VK3VG	Trevor	46 SSB
VK7MO	Rex	46 SSB
VK3AKK	Ken	45 SSB
VK4CDI	Phil	45 SSB
VK7MO	Rex	45 Digi
VK4KZR	Rod	43
VK4TJ	John	41 SSB
VK3EJ	Gordon	40 SSB
VK3PF	Peter	40 Digi
VK2TG	Bob	39 SSB
ZL3TY	Bob	37
VK3UH	Ken	36
VK2TK	John	35 SSB
VK2KOL	Colin	34 SSB
VK6HK	Don	34
VK3II	Jim	33 Digi
VK3ZUX	Denis	33 SSB
VK1DA/p	Andrew	31

VK1WJ	Waldis	28
VK2TK	John	27 Digi
VK1WJ	Waldis	23 Digi
VK3TLW	Mark	23 SSB
VK4CDI	Phil	23 Digi
VK4EME	Allan	23
VK3ALB/p	GARC Team	22 SSB
VK3BG	Ed	22 SSB
VK3ECH	Rob	20 SSB
VK6KZ	Wally	20
VK2ZT	Steve	19 Digi
VK3KH	Michael	19 Digi
VK4EME	Allan	19 SSB
VK3AL	Alan	18 SSB
VK6KZ/p	Wally	16
VK2EI	Neil	12 Digi
VK4EME	Allan	12 Digi
VK5APN	Wayne	12
VK2DVZ	Ross	9 Digi
VK2KOL	Colin	9 Digi
VK2AMS	Mark	8 Digi
VK1WJ	Waldis	7 SSB
VK5APN	Wayne	7 Digi
VK5APN	Wayne	6 SSB
VK6HK	Don	6 Digi
VK1WJ	Waldis	5 CW
VK4AE	Denis	5 SSB
VK4JAZ	Grant	4 FM
VK2GG	Dan	3
VK3QM	David	1 Digi
VK4FNQ	John	1 FM

144 Mhz	EME	
VK2KU	Guy	434
VK2KU	Guy	420 Digi
ZL3TY	Bob	392
VK3AXH	Ian	265 Digi
VK4CDI	Phil	241 Digi
VK5APN	Wayne	192
VK5APN	Wayne	189 Digi
VK7MO	Rex	157 Digi
VK2FLR	Mike	120
VK3II	Jim	87 Digi
VK2DVZ	Ross	81 Digi
VK3KH	Michael	49 Digi
VK2KU	Guy	43 CW
VK3DDU	Paul	39 Digi
VK2ZT	Steve	28 Digi

VK3HZ	David	19
VK5APN	Wayne	8 CW
VK3NX	Charlie	5 CW
VK4EME	Allan	5 Digi
VK3AXH	Ian	3 CW
VK2DVZ	Ross	2 CW
VK3AXH	Ian	1 SSB

432 Mhz	Terrestrial	
VK2ZAB	Gordon	57 SSB
VK3PY	Chas	51 SSB
VK3NX	Charlie	50 SSB
VK3QM	David	50 SSB
VK3ZLS	Les	40 SSB
VK3BJM	Barry	39 SSB
VK3HZ	David	39
VK5AKK	Phil	39 SSB
VK2KU	Guy	38
VK2DVZ	Ross	34 SSB
VK2ZT	Steve	34 SSB
VK3BDL	Mike	33 SSB
VK3WRE	Ralph	33 SSB
VK3PF	Peter	32
VK3PF	Peter	30 SSB
VK5BC	Brian	26 SSB
VK1DA/p	Andrew	24
VK2MER	Kirk	24 SSB
VK3KH	Michael	21 SSB
VK3VG	Trevor	20 SSB
VK5BC/p	Brian	20 SSB
VK7MO	Rex	20
VK2AMS	Mark	18 SSB
VK2TK	John	18
VK3ALB/p	GARC Team	18 SSB
VK7MO	Rex	18 SSB
VK2TK	John	17 SSB
VK3AKK	Ken	15 SSB
VK3BG	Ed	15 SSB
VK3TLW	Mark	15 SSB
VK3ZUX	Denis	15 SSB
VK4KZR	Rod	15
VK4CDI	Phil	14
VK4CDI	Phil	14 SSB
VK6KZ	Wally	13
VK2EI	Neil	12 SSB
VK2KOL	Colin	12 SSB
VK4TJ	John	11 SSB
VK2TG	Bob	10 SSB
VK3AL	Alan	10 SSB

VK3ECH	Rob	10 SSB
VK4FNQ	John	10 SSB
VK6KZ/p	Wally	8
VK3UH	Ken	7
VK7MO	Rex	7 Digi
VK4EME	Allan	6 SSB
VK1WJ	Waldis	5 SSB
VK3KH	Michael	5 Digi
VK4CDI	Phil	5 Digi
VK2DVZ	Ross	4 Digi
VK2ZT	Steve	4 Digi
VK3PF	Peter	4 Digi
VK3PY	Chas	4 Digi
VK3QM	David	4 Digi
VK2AMS	Mark	3 Digi
VK4AIG	Denis	3 SSB
VK4JAZ	Grant	3 FM
VK2GG	Dan	2
VK2KOL	Colin	1 Digi
VK2TK	John	1 Digi

432 MHz	EME	
VK4EME	Allan	50
VK4EME	Allan	45 Digi
VK4CDI	Phil	37 Digi
VK7MO	Rex	10
VK7MO	Rex	9 Digi
VK4EME	Allan	8 CW
VK3NX	Charlie	5 CW
VK3AXH	Ian	4 Digi
VK3HZ	David	4
VK3KH	Michael	3 Digi
VK3NX	Charlie	3 Digi
VK2ZT	Steve	2 Digi
VK5BC	Brian	1

1296 MHz	Terrestrial	
VK3PY	Chas	41 SSB
VK3QM	David	41 SSB
VK3NX	Charlie	37 SSB
VK2ZAB	Gordon	29 SSB
VK2DVZ	Ross	26 SSB
VK3ZLS	Les	26 SSB
VK2KU	Guy	25
VK5AKK	Phil	25 SSB
VK3BJM	Barry	22 SSB
VK3PF	Peter	22
VK3PF	Peter	20 SSB
VK3WRE	Ralph	20 SSB
VK3KWA	John	19
VK3BDL	Mike	18 SSB
VK3HZ	David	18

VK3ALB/p	GARC Team	16 SSB
VK3KH	Michael	16 SSB
VK2ZT	Steve	13 SSB
VK3VG	Trevor	12 SSB
VK4KZR	Rod	12
VK3BG	Ed	11 SSB
VK5BC	Brian	11 SSB
VK7MO	Rex	11 SSB
VK1DA/p	Andrew	10
VK2TK	John	10 SSB
VK5BC/p	Brian	9 SSB
VK2AMS	Mark	8 SSB
VK3TLW	Mark	8 SSB
VK3AL	Alan	7 SSB
VK3UH	Ken	7
VK2MER	Kirk	6
VK3ECH	Rob	6 SSB
VK3ZUX	Denis	5 SSB
VK4CDI	Phil	5
VK4CDI	Phil	5 SSB
VK4TJ	John	5 SSB
VK6KZ/p	Wally	5
VK6KZ	Wally	4
VK4EME	Allan	3 SSB
VK7MO	Rex	3 Digi
VK2GG	Dan	2
VK2TG	Bob	2
VK3PF	Peter	2 Digi
VK3QM	David	2 Digi
VK4AIG	Denis	2 SSB
VK4CDI	Phil	2 Digi
VK4FNQ	John	2 SSB
VK2DVZ	Ross	1 Digi
VK2EI	Neil	1 SSB
VK2ZT	Steve	1 Digi
VK3KH	Michael	1 Digi
ZL3TY	Bob	1 SSB

1296 MHz	EME	
VK4CDI	Phil	66
VK3NX	Charlie	54 CW
VK4CDI	Phil	53 Digi
VK7MO	Rex	41
VK7MO	Rex	36 Digi
VK4CDI	Phil	20 CW
VK4CDI	Phil	2 SSB

2.4 GHz	Terrestrial	
VK3PY	Chas	18 SSB
VK3NX	Charlie	17 SSB
VK3QM	David	17 SSB
VK3AKK	Ken	15 SSB
VK3WRE	Ralph	11 SSB
VK3ALB/p	GARC Team	7 SSB
VK3PF	Peter	7 SSB
VK3KH	Michael	6 SSB
VK3HZ	David	5
VK4KZR	Rod	4
VK6KZ	Wally	4
VK3BJM	Barry	3 SSB
VK3KH	Michael	3 Digi
VK1DA/p	Andrew	2
VK2AMS	Mark	2 SSB
VK2EI	Neil	2 SSB
VK2GG	Dan	2
VK3PF	Peter	2 Digi
VK2DVZ	Ross	1 SSB
VK3BG	Ed	1 SSB
VK3TLW	Mark	1 SSB
VK3ZUX	Denis	1 SSB

2.4 GHz	EME	
VK3NX	Charlie	39 CW
VK7MO	Rex	14
VK7MO	Rex	10 Digi

3.4 GHz	Terrestrial	
VK3NX	Charlie	14 SSB
VK3QM	David	14 SSB
VK3WRE	Ralph	8 SSB
VK3PF	Peter	6 SSB
VK6KZ	Wally	4
VK2GG	Dan	2
VK2AMS	Mark	1 SSB
VK2EI	Neil	1 SSB

3.4 GHz	EME	
VK3NX	Charlie	16 CW

What is a grid square?

A grid square is an alternative locator system which is simpler to exchange over radio under weak signal conditions. At Australian latitudes, the squares are more a rectangle. Each square is 2° longitude by 1° latitude. Google "Maidenhead Locator System".

5.7 GHz	Terrestrial	
VK3NX	Charlie	14 SSB
VK3QM	David	12 SSB
VK3PY	Chas	10 SSB
VK3WRE	Ralph	9 SSB
VK3PF	Peter	7 SSB
VK3ALB/p	GARC Team	6 SSB
VK6KZ	Wally	4
VK2GG	Dan	3
VK3BJM	Barry	2 SSB
VK3PF	Peter	2 Digi
VK6BHT	Neil	2 SSB
VK2AMS	Mark	1 SSB
VK2EI	Neil	1 SSB
VK3ZUX	Denis	1 SSB

5.7 GHz	EME	
VK3NX	Charlie	23 CW

10 GHz	Terrestrial	
VK3HZ	David	61
VK3HZ	David	22 SSB
VK3PY	Chas	17 SSB
VK3AKK	Ken	16 SSB
VK3QM	David	15 SSB
VK3NX	Charlie	14 SSB
VK3PF	Peter	11 SSB
VK3WRE	Ralph	11 SSB
VK6BHT	Neil	9 SSB

VK3ALB/p	GARC Team	7 SSB
VK2EI	Neil	6
VK6KZ	Wally	5
VK2EI	Neil	3 Digi
VK3KH	Michael	3 SSB
VK3TLW	Mark	3 SSB
VK7MO	Rex	3
VK2GG	Dan	2
VK3BJM	Barry	2 SSB
VK3KH	Michael	2 Digi
VK3UH	Ken	2
VK3ZUX	Denis	2 SSB
VK4KZR	Rod	2
VK1DA/p	Andrew	1
VK2AMS	Mark	1 SSB
VK3BG	Ed	1 SSB
VK3NX	Charlie	1 Digi

10 GHz	EME	
VK3NX	Charlie	16 CW

24 GHz	Terrestrial	
VK3NX	Charlie	4 SSB
VK3QM	David	3 SSB
VK6BHT	Neil	3 SSB
VK2EI	Neil	2 SSB
VK2GG	Dan	2
VK6KZ	Wally	2
VK3WRE	Ralph	1 SSB

47 GHz	Terrestrial	
VK3NX	Charlie	4 SSB
VK3QM	David	4 SSB
VK2GG	Dan	2

474 THz		
VK3WRE	Ralph	3
VK3HZ	David	2
VK7MO	Rex	2
VK7MO	Rex	2 Digi
VK7TW	Justin	2
VK7TW	Justin	1 Digi

Additions, updates and requests for the guidelines to Guy VK2KU.

The guidelines (and the latest League Table) are also available on the VK VHF DX Site at <http://vhfdx.radiocorner.net> - click on Gridsquares.

Next update of this table will close on or about 14 October 2011.

Stations who do not confirm their status for more than 12 months may be dropped from the table.



Silent Key Wayne Kilpatrick VK5ZX

It is with great sadness that the South East Radio Group (SERG) wishes to inform the amateur radio community of the passing of Wayne Kilpatrick VK5ZX. Wayne was a long time member of the SERG and was enthusiastic and passionate about everything he took on. He was first licensed in 1987 as VK5ZDX, then as VK5KWK when he attained his five word Morse code, and finally as VK5ZX in 1988. He was active on all HF, VHF and UHF bands and also had a strong interest in amateur television.

Wayne held a number of positions in the club, as President, Secretary and Convention Coordinator right up until this

year. The club recognized his achievements and his efforts by awarding him Life Membership at Christmas in 2010.

Wayne's passion for radio direction finding, and all things GPS and mapping, had him involved in the SES in many roles, particularly around search and rescue activities. He was called on many times to locate EPIRBs, on behalf of the Police Department, but fortunately none of them required a formal rescue.

He was also the main organizer behind the annual Fox Hunting competition held in Mount Gambier every Queen's Birthday weekend and the success of the event was reflected by his close attention to

detail and knowledge of the local topography.

Wayne's other life was tennis. He was fortunate enough to be able to make it his career and in becoming a coach was able to inspire many to take up the sport.

Wayne is survived by his wife Bronwyn and his daughters Kate and Jess. Our heartfelt sympathies go out to them. Wayne Kilpatrick VK5ZX will be sadly missed by everybody who knew him; his enthusiastic and contagious manner touched so many people.

Contributed by the SERG.



VK4news The Tableland Radio Club

Ross Anderson VK4AQ, Mike Patterson VK4MIK and Pat Edmunds VK4FUY

Radio active holidays in north Queensland 2011

The Tableland Radio Group (TRG) has had a busy but enjoyable time operating during various locations in far north Queensland during May and June and trying various modes and equipment as the Group is wont to do during these excursions.

Our first trip this year saw us at Mount Fox, inland from Ingham and at an altitude of nearly 600 metres. The small community has a 'Cricket Club' which boasts rudimentary toilets/showers and a large undercover area for socializing, not to mention the most magnificent camping area. Wilf VK4ZNZ and XYL Helen arrived on the Thursday only to be greeted by frost on the ground on the Friday morning which had Helen set to 'up bag and hammock' and head for home. Not long after, Rossco VK4AQ and XYL Bev and a newcomer to amateur radio Peter VK4FZAB arrived and successfully persuaded Helen to do a rethink. By Saturday morning seven of us had gathered including Keith VK4BKS and XYL Barb and Mike VK4MIK. It was not long before the 'Lord Mayor of Mount Fox' and well popular local raconteur Rob VK4ARQ, and XYL Carolyn joined us.

Mt Fox had been very heavily impacted by Cyclone Yasi recently and the severe damage was still quite evident. Rob VK4ARQ suffered quite significant damage to his extensive plantation holdings and it was quite tragic to see how years of hard and painstaking work could be so quickly undone by Mother Nature. However, there is not a man on the face of this earth more resilient than Rob and I am sure he will quickly pick himself up again. The only 'upside' to this dreadful damage was the unlimited fuel source for the donkey boiler at the Cricket Club. Certainly no shortage of hot showers before the cold of the evening set in. Boy, were the mornings cold!

Our Mt Fox antenna farm comprised a vertical based on a squid pole, an inverted V and a four element horizontally orientated two metre beam tied to a rope and pulled up a tree, thereby saving a pole being included. Good sideband contact on the two metre beam was achieved with John VK4FNQ near Charters Towers.

On Saturday night we had a BBQ where we had about a dozen locals come and join us, which gave good PR for our hobby of amateur radio. Mario VK4MS and XYL Colleen, also Mt Fox weekenders, joined us as well. This developed into a long night with some partying on until the early hours.

Rossco's camp oven leg of lamb, with mint sauce and baked vegetables proved to be a hit the following evening – we had four chefs drop by on a sightseeing trip and they gave Rossco guidance on cooking lamb! Wilf and Mike did some instruction and practicals with Peter FZAB. A pity, though, about Mike's box kite/antenna experiment, hi. Another highlight of the trip was perfect daily vision of the four planets which seemed to be aligned 'especially for us'. We also witnessed a fly-by of the International Space Station which was extremely bright in the bush setting. Despite some drizzle and cold we managed to join various Nets and made many contacts and enjoyed the experience.

After a brief return home it was repack and off to Charters Towers to repeat the exercise in a new location



Photo 1: The group at John VK4FNQ's QTH at Charters Towers, including members of the Townsville ARC. L-R Blue VK4FBLU, Gavin VK4ZZ, Peter VK4APE, John VK4FNQ, Richard VK4FRJG, Mike VK4MIK, Wendy xyl Ray, Ray VK4NET and Rossco VK4AQ.

with Ross and XYL Bev and Mike. This time we had some excellent socializing with the Townsville Amateur Radio Club (TARC) when about ten of their members and XYLs joined us at the QTH of John VK4FNQ, and our camp site for a monster morning tea. The Tarcadians gave our camp site a good going over and, as ever, it is good to be able to have these eye-ball contacts and be able to put faces to callsigns. Included in the visit were Gavin VK4ZZ, Ray VK4NET and XYL Wendy, Blue VK4FBLU, Richard VK4FRJG, Peter VK4APE, Mal VK4MSS and, of course, John VK4FNQ and XYL Cheryl VK4FRYL. Chris VK4FR joined us later in the afternoon and it was lovely to catch up with him again.

During our stay we operated CW, SSB and digital into various nets and on 40 metres it was interesting seeing the late afternoon net fall apart locally but still permit long haul contacts. Murphy paid us a visit and saw a keyboard become intermittent and a few finger problems with menus and sub menus needing re-inputs and setting changes. We used a long wire and dipole plus a two metre beam and battery power and had solar panels for charging.

RossCO had very good success with his especially made camping FNQ Special. A little Santa Gertrudis bull quite fancied the antenna's counterpoise as something tasty on which to chew, too. Over a beer that evening, RossCO was heard to wonder if the bull's ribs hurt — because the top of his bare bloody foot certainly did. The skills we practice on these camps are vital in emergency type situations and as Ross had recently completed the Emergency Communications Course with WIA and as he had been through Cyclones Winifred, Joy, Larry and Yasi, we were able to kick many ideas around on the subject. Radio operated from battery can be vital although operating during 200 kph plus winds isn't ideal as antennas tend to break and cause more missiles and whipping wire.

Trip to Normanton - Pat VK4MUY

Sunday, 23 May saw four intrepid TRG members head off for Undara. Sleeping accommodation was in beautifully restored QR railway carriages. On the Monday morning Wilf VK4ZNN and Dave VK4FUY headed off on a two hour tour of two of the famous Undara Lava Tubes. Besides viewing the spectacular underground formations, Wilf also braved a dip in an underground stream which he reckoned was 'quite invigorating'. In the meantime Wilf's XYL Helen and Dave's XYL Pat VK4MUY kept themselves amused playing 'Upwards'.

The following day the team headed for Normanton near the south-eastern coast of the Gulf of Carpentaria, where the local tourist park was ready for their arrival. Following the heavy wet season an abundance of wildlife was spotted in the lush greenery on the trip into Normanton, among which included the majestic brolgas.

Tuesday saw the four setting off on the old RM60 train for a memorable trip on the iron sleeper railway. Wilf was excited to hear of one of the few surviving telegraph poles in the region and was extremely fortunate to get up close

and personal with it — climbing up about a quarter the height. After chatting to a local about the pole, he was given two original insulators — one even printed 'Made in Occupied Japan'. Later that day, Wilf and Dave attempted to fly a box kite which it was hoped would carry an antenna aloft, but unfortunately the wind was unpredictable and the kite spent more time on the ground than in the air!

Things warmed up radio wise with the arrival on Wednesday of Mike VK4MIK, Billy VK4WL and Stan VK4MBA with XYL Val. Mike very quickly set up a long wire for HF, making lots of contacts, including local nets. Thursday morning found Billy busy figuring out how to assemble and set up his new 'Buddi' pole, with assistance from Wilf, watched by Dave, with Mike making an inspection once it was erected. In the evening, the Group visited the Purple Pub which was close to the tourist park for a pleasant meal.

On Friday while Mike and Billy played radio and Helen and Wilf visited friends, Stan, Val, Dave and Pat drove to Karumba where Stan and Val had lived for several years. Catching up with old friends and buying locally caught fresh fish, was well worth the drive. To round off a fantastic week, all remaining food and drink was 'pooled' for an evening get-together rounded off with a few comedy poems penned by Pat VK4MUY.

Next morning we left in convoy for the seven hour return trip.

In the final analysis it was unanimously agreed that it had been a great trip, wonderful scenery, exciting experiences and some good radio contacts, particularly with Lyn VK4SWE who lives on Sweers Island in the Gulf of Carpentaria the best of all — with a group of fantastic

friends united by the commonality of amateur radio.

The last adventure saw a day trip to the Cardwell Bush Telegraph Heritage Centre by Bill VK4WL and Mike VK4MIK to see how it was coming along post Cyclone Yasi. It was great to see that the old post office/telegraph station, that was built in 1870 as a telegraph office and operated as such until 1983, when, in 2003, it was converted to its present status, was still intact with little damage sustained. There is much to see and interact within the many displays at the Centre and the volunteer staff are very informative and friendly and are justly proud of their displays and history. In the early days it was the other end of the telegraph that ran to Normanton and Karumba. We enjoyed it immensely and a visit can be highly recommended to any enthusiast travelling up the coast in future.

It was great to enjoy the various camping spots and the friendship of the many hams we visited, connected with via radio or who, indeed, visited us, together with the closeness of the friends within the Tableland Radio Group. The success of these types of activities require a balance between the overwhelming urge to 'play radio' with the social aspects and visiting the local history and attractions, but it can be done to the benefit and enjoyment of all!

AR



Photo 2: Mike VK4MIK makes up a batch of croquettes in the five star camp kitchen.

Hamads

FOR SALE - VIC

Radio Projects for the Amateur - Volumes 1 - 4 are back in print by popular demand. Practicable plans for the construction of receivers, transmitters, antennas and couplers, test equipment, with lots of workshop notes, prepared by Drew Diamond, VK3XU. Available from the WIA Online bookshop, www.wia.org.au

WANTED - VIC

Wanted dead or alive, but preferably alive. "Multi-channel unit" for an AWA CR-6A communication receiver, preferably with matching front panel and double knob. (Please see "Freq. Control" knob on the panel, above the RF Gain control, here - <http://www.ling.mq.edu.au/~robinson/museum/CR6/>)

This unit was an "optional oscillator unit that allows the receiver to operate as a fixed frequency receiver. A front panel switch turns the mixer oscillator off and switches in one of 6 crystals. This uses half of a 12AU7 as the local oscillator."

"An optional control, which is fitted to this receiver is the FREQ. CONTROL. This may be covered by a plate on some receivers. The knob has 2 concentric controls. The outer one called CRYSTAL is a 7 position switch that selects one of 6 crystals for fixed channel reception, or a MANUAL position for normal reception. The centre knob is a trimmer which provides fine control of the optional oscillator frequency." (Quotes from Ray Robinson, VK2ILV's excellent website - link above).

In the radio in question here, there is actually no cover plate. Instead, there is an indicator lamp on a simplified panel without the necessary labels. Please call Mike VK3KRO, QTHR on 0417 358 751 or email vk3kro@yahoo.com

I am looking for a GR 1931A AM Modulation monitor. Can anyone help me?

John Eggington VK3EGG, Phone 03 9752 6184 or 0409 234 672, or vk3egg@optusnet.com.au

FOR SALE - NSW

Byer 16-inch three-speed transcription turntable mounted on a sturdy, stable base. Ex broadcasting station. Heavy, so pick up only. Mid north coast NSW, near Forster. \$50.00.

Contact VK3ZA macben2@bigpond.com

FOR SALE - QUEENSLAND

Gap Titan DX vertical dipole antenna. Works on the 10 m, 12 m, 15 m, 17 m, 20 m, 30 m, 40 m and 80 m bands. It is 11.8 m in height.

The Titan is a centre fed GAP vertical dipole antenna offering broad continuous frequency coverage across each band, and is designed to work in a limited space. No radials needed. Sale price \$150.00

Hy-Gain model 18AVT vertical antenna, covering the 80 m, 40 m, 20 m, 15 m and 10 metre amateur bands. Good condition and is presently disassembled. Rated at 1 kW. Radials would be required. Sale price \$50.00

Screwdriver, all band mobile antenna, HB, 90% complete, needs motor control circuit and input circuit. Completed in aluminium with stainless steel fittings; the variable coil is in copper. The system works well. Construction details included. Sale price \$50.00

Transport is additional in each case. Please call Harry VK4EL on 07 5445 2647 or email glenviewinfo@optusnet.com.au Going to retirement village where antennas are taboo.

ADVERTISERS INDEX

Av-com	55
Com-an-tena	19
Cookson (Jackson Bros)	55
Hamak Electrical Industries	55
Icom	OBC
Jaycar	17
Kuhne Electronic	11
TET-Emtron	13
TTS	15, 55
Yaesu (Vertex)	IFC

FOR SALE - SA

The popular VK5JST Antenna Analyser kits are still available through the South Coast Amateur Radio Club. Build yourself arguably the most useful item for your shack. Over 1000 overseas hams have. See www.scarc.org.au or contact SCARC PO Box 333 Morphett Vale SA 5162. Alternatively email kits@scarc.org.au



Contributions to Amateur Radio

AR is a forum for WIA members' amateur radio experiments, experiences, opinions and news.

Your contribution and feedback is welcomed.

Email the Editor:
editor@wia.org.au

About Hamads

- Submit by email (**MUCH PREFERRED**) or if written and mailed please print carefully and clearly, use upper AND lower case.
- Deceased estates Hamads will be published in full, even if some items are not radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from those who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising on these pages Contact admanager@wia.org.au.
- Copy to be received by the deadlines on page 1 of each issue of Amateur Radio.
- Separate forms for For Sale and Wanted items. Include name, address STD telephone number and WIA membership number.

'Hamads'

PO Box 2042
BAYSWATER VIC 3153
hamads@wia.org.au

TRADE PRACTICES ACT

It is impossible for us to ensure that the advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore, advertisers will appreciate the absolute need for themselves to ensure that the provisions of the Act are strictly complied with.

VICTORIAN CONSUMER AFFAIRS ACT

Advertisements with only a PO Box number address cannot be accepted without the addition of the business address of the box-holder or seller of the goods.

AMIDON FERROMAGNETIC CORES



its systems

Phone 03 5977 4808. Fax 03 5977 4801
info@ttssystems.com.au

VKHAM.COM

AUSTRALIAN AMATEUR RADIO
Hundreds of pages and links
related to Amateur Radio
and radio in general

HOME OF

- VK Classifieds
- VK Auctions
- VKs on the Internet

Repeater Maps, Software, Prefix Maps and more...

RM Products Italy

are now available in Australia after the
appointment of

Hamak Electrical Industries Pty Ltd

as distributor for RM products

Visit the Hamak website at

Hamak.com.au

for

**Linear amplifiers,
Power supplies
and accessories**



JACKSON BROS

www.jacksonbrothers.com.au

Highest quality products made by UK craftsmen

Variable and trimmer

capacitors, reduction drives,

dials, ceramic standoffs



CATALOGUES, PRICE LISTS AVAILABLE

HAMMOND ENCLOSURES



MANUFACTURING Large range of quality electronic

enclosures for the discerning Radio Amateur.

Diecast, extruded aluminium and plastic enclosures

and instrument cases. As seen in many ARRL projects.



COOKSON CHARLES I COOKSON

PTY LTD

11-13 Port Rd Queenstown SA 5014

Tel: (08) 8240 3200 Fax: (08) 8240 3233

sales@jacksonbrothers.com.au

ccookson@hammfg.com

ALL MAJOR CREDIT CARDS ACCEPTED

SOLE AGENTS AUSTRALIA AND NEW ZEALAND



Tecsun PL 600 HF Receiver

Easy to use 600 memories

Identical coverage to Degen 1103

Product Showcase Silicon Chip
October 2008



**ONLY \$179 +
shipping**

Easy to use
600 memories
Product Showcase Silicon
Chip October 2008

Av-Comm Pty Ltd
24/9 Powells Road
Brookvale NSW 2100
Tel: 02 9939 4377
Fax: 02 9939 4376

Email: info@avcomm.com.au
www.avcomm.com.au

Mobile Repeater Mast Van

Chrysler Voyager 1999,
120ks Automatic, rear
seats have been removed,
8.5 metre high mast.

Four new tyres, serviced
every 5,000ks.

Cost to supply and fit mast
alone was \$15,000.

Sale price for van and
mast is \$11,000.

Paul **0433 137 392**



Directory

National Office

Unit 20, 11-13 Havelock Road
PO Box 2042 BAYSWATER VIC 3153

Contact 10 am to 4 pm weekdays
Phone **03 9729 0400** Fax **03 9729 7325**
nationaloffice@wia.org.au
<http://www.wia.org.au>



The Amateur Service

... a radio communications service for the purpose of self training, intercommunication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique with a personal aim and without any pecuniary interest.

56 ITU Radio Regulations

Advisory Committees

New South Wales/ACT Advisory Committee

Email: vk2advisory@wia.org.au
John Bishop VK2BK*
Dominic Dahl VK2YDD
Timothy Mills VK2ZTM / VK2UJ
Gilbert Hughes VK1GH

Victorian Advisory Committee

Email: vk3advisory@wia.org.au
Bob Tait VK3XP*
Luke Steele VK3HJ
Noel Ferguson VK3FGN
Chris Chapman VK3QB

Queensland Advisory Committee

Email: vk4advisory@wia.org.au
Don Wilschefske VK4BY
Kevin Johnston VK4UH
Michael Charteris VK4QS*
Ken Fuller VK4KF

South Australian Advisory Committee

Email: vk5advisory@wia.org.au
David Clegg VK5KC*
Peter Reichelt VK5APR
Ben Broadbent VK5BB
Trevor Quick VK5ATQ

Western Australian Advisory Committee

Email: vk6advisory@wia.org.au
Martin Stretton VK6ZMS*
Heath Walder VK6TWO
Craig Lamb VK6FLAM

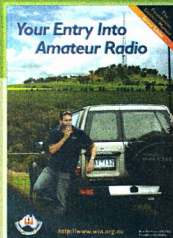
Tasmanian Advisory Committee

Email: vk7advisory@wia.org.au
David Potter VK7YUM
Clayton Reading VK7ZCR
Justin Giles-Clark VK7TW*
Peter Rumble VK7IY

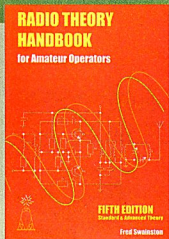
Northern Territory Advisory Committee

Email: vk8advisory@wia.org.au
Peter Blackadder VK8HPB*
Garry Woods VK8GW
Alan Baker VK8AB
Mark Sellers VK8MS

*Denotes nominated by the WIA Board
(*Nominated Member*)



WIA Bookshop



Two of the
great learning
resources
available from
our online
bookshop.

Visit <http://www.wia.org.au/members/bookshop/> to see more!

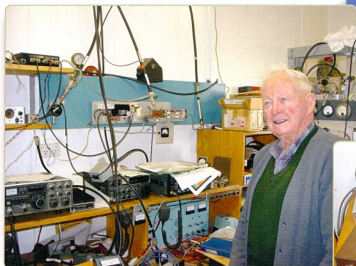
Wally Green VK6WG and some of his amateur radio equipment

Wally is quite active on many bands, particularly still when tropospheric propagation exists across the Great Australian Bight.

Images taken by Doug Friend VK4OE when visiting Wally in September 2005.



Microwave antennas close up – fixed pointing at Adelaide!



Wally in his shack – various VHF-and-above gear around, including on the wall a home-made transverter for 3456 MHz used for early cross-the-Bight QSOs.

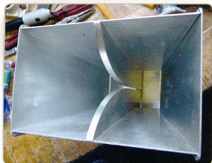


Work in progress – a home-made transverter for the 10 GHz band.

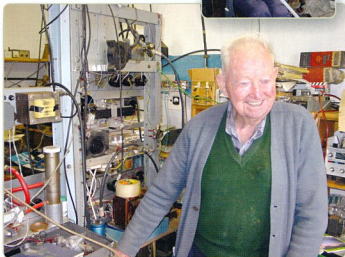


A home-made power amplifier for 1296 MHz with (strikingly!) the use of oil cooling of the power tubes.

Wally also has quite a few good stories to tell!



Wally is very good at making things. Here is a broadband microwave horn antenna/feeder that he has constructed from a published German design.



Wally and the back of the 1296 MHz rack – he's always ready for a laugh!

Unrivalled

IC-9100 - The Ultimate All-Rounder

- Fully Covers HF, 50MHz, 144MHz, 430/440MHz and 1200MHz*
- Satellite Mode Operation
- D-STAR DV Mode (with Optional UT-121)
- Simultaneous Receive on Two Different Bands
- Optional 3kHz and 6kHz first IF filters for the HF/50MHz Band
- Built-In Band Scope
- Built-In Automatic Antenna Tuner for HF/50MHz Band

*Optional UX-9100 1200MHz Band Unit is Required

Amateur



DIGITAL | D-STAR

ICOM
ICOM 484

To find out more about our latest products,
call Icom on 03 9549 7500 or visit www.icom.net.au